What is the best way for me to get started?

To familiarize yourself with the five different types of activities, you may want to read the first week’s activities in the Instructor’s Guide. Then look over the rest of the materials in the kit.

- You may decide to start with Week 1 Activity 1 and work through the activities in order, or give the students some or all of the diagnostic tests to determine their strengths and weaknesses. The diagnostic tests are located on pages 181-190 of the student book. There are five separate two-page tests for the five different mathematics strands — number, operations, geometry, measurement, and algebra. Answers to the tests are found in the Instructor’s Guide, beginning on page 213.

The test items are correlated to the 180 activities in the program. You may decide to pick and choose activities based on specific math strands or concepts.

- Next, remove the Math Jumble activity poster from the kit. Slit the poster along the cut lines indicated on the poster. Insert paper clips and tape the paper clips to the back of the poster. When you do the Math Jumble activities, slide the digit or coin cards under the paper clips to attach them to the poster.

- You will need to punch out the Math Maze cards from the perforated sheets. Each sheet and the individual cards are labeled by week number and activity number. To keep the cards organized in your kit, you may want to bundle together each deck of cards with a rubber band or store them in plastic resealable bags.
Materials
Student page 1

Concept
Decide whether objects are alike or different.

Background
Classification, or grouping of objects by similarity, provides a foundation for the growth of number, spatial, and measurement concepts, as well as for the development and growth of algebraic and logical thinking. Classification involves decisions: Does the object belong to a certain group, or not? Does the object contain a property or several properties that makes it more like than different from the group? Early classification activities include sorting and comparing. Children need to have heard the terms alike and different.

Get Started
Show a few writing utensils (pen, pencil, crayon, or piece of chalk) and other objects (cup, book, or ruler) to the children. Ask:
- How are some of the objects alike in some way?
- How are some objects different from other objects?
- How can you sort these objects into two groups?
- How can you sort these objects into two groups another way?

Students may sort the objects in different ways.

For writing: pen, pencil, crayon
Not for writing: cup, book, ruler

For school: pen, pencil, crayon, book, ruler
Not for school: cup

Show a pencil, crayon, cup, and pen to children. Ask:
- Which objects are alike? (pencil, pen, crayon)
- Which one is different? (cup)
- Which one does not belong? (cup)

Note: If children sort by some other attribute, such as size or color, be sure to validate those observations equally.

Today's Challenge
Student page 1 Have children complete the activity on the student page. In each section, children should circle the objects that are alike and draw an X on the object that is different.

Answers for student page 1: 1. circle: hat, baseball cap, stocking cap; X on: shoe 2. circle: soccer ball, baseball, basketball; X on: baseball glove 3. circle: cat, dog, bird; X on: birthday cake

Go Further
Student page 1 Have children complete the activity on the student page. Children look at the pictures to find the objects that are alike and then draw a line from each to place them in the box.

Answers for student page 1: 4. Answers will vary, depending on how children classify them. The objects that are alike include: teddy bear and cat, crayon and pencil, soccer ball and football.

Assessment
Student self-assessment page 1: Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip: Can children classify objects as alike or different?
Materials
Student page 2
Math Maze cards (Week 1 Activity 2)
Red and green crayons or markers

Concept
Match numerals 1 through 10 with appropriate sets of objects.

Get Started
Write the numerals 1 through 10 on the board in a vertical column. Then draw the appropriate number of large dots beside each numeral. Have the children count the group of dots for each numeral.

1
2
3
4
5
6
7
8
9
10

Erase the dots for the numerals 2, 5 and 8. Then have children come to the board to draw the appropriate number of dots for each numeral that doesn't have a group of dots. Note: Call the numeral a “number” at this time.

Erase the numerals 3, 6, and 9. Then have children come to the board and write the appropriate numeral for each group of dots without a numeral.

Finally, erase either all the dots or all the numerals. Then have children write the missing numerals or draw the missing groups of dots.

Today’s Challenge
Distribute the 18 Math Maze cards for Week 1. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first student’s card. Some answers are pictures. In that case, children can describe the picture or draw it on the board.

The correct sequence of questions and answers is shown on page 181.

Student page 2 When the group has finished playing the game, have children open their books and complete the Today’s Challenge activity on page 2 in the student book.

Answers for student page 2: 1 elephant, 2 hippos, 3 bears, 4 horses, 5 cats, 6 dogs, 7 owls, 8 butterflies, 9 ladybugs, 10 bees

Go Further
Student page 2 Have children complete this section on the student page.

Answers for student page 2: Color any 4 turtles red. Color any 7 turtles green.

Assessment
Student self-assessment page 2 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children associate a numeral with the correct number of objects?
Materials
Student page 3
Blank paper

Concept
Review attributes of geometric shapes.

Get Started
To review names of shapes, copy these figures on the board. Ask children to name the shapes. Then write the name of the figures below them.

triangles  circles  rectangles

Have children lie on the floor and together use their bodies to make these three shapes.

Ask: “What did you have to do with your bodies to make these shapes?”

(A triangle has to have three sides, a circle has to be curved with no straight sides, and a rectangle has to have four sides.)

Today’s Challenge
Explain that today you will be playing a game called “Who Wants to be the Top Scorer?” Take blank pieces of paper and draw one of these shapes on each piece of paper. Have each child choose a shape. Then ask children to number their papers from 1 to 4.

As you ask each of four questions, have children look at their shapes and answer the question. If their answer is yes, then they are to make a checkmark. If their answer is no, they are to draw a dash. Each yes answer, or checkmark, will score a point.

Here are the questions to ask:
1. Does your shape have three sides? If yes, make a checkmark.
2. Is your shape a rectangle? If yes, make a checkmark.
3. Does your shape have the same shape as a wheel? If yes, make a checkmark.
4. Does your shape have four sides? If yes, make a checkmark.

Top scorer(s) will have a rectangle.

Have children find their total scores by counting their checks. Ask a volunteer to show his or her drawing and explain the score.

Go Further
Student page 3 Have children draw the correct shape under the name and create a picture from each shape. See example.

Answers for student page 3: Check to see if children drew the correct shapes.

Assessment
Student self-assessment page 3 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children understand the attributes of a rectangle?
Materials
Student page 4
Math Jumble activity poster and 1–9 domino cards

Concept
Recognize the value of specific dominoes.

Get Started
Draw the dot configuration for each domino half 1 through 9 on the board. Have volunteers come to the board to write the number of dots for each drawing.

![Domino diagrams](image)

1 2 3

Today's Challenge
Using the 1–9 domino cards, construct the 3 by 3 poster shown. Explain that the object of today's Math Jumble is to identify as many dominoes as possible. Point to each domino and have the children identify them.

Answers:
1, 5, 6, 7, 2, 3, 4, 9, 8

Student page 4 Then have the children identify the dominoes in the Math Jumble on student page 4.

Answers for student page 4: Children should draw the corresponding domino half to go with each number.

1. ![Domino diagram](image)
2. ![Domino diagram](image)
3. ![Domino diagram](image)

4. ![Domino diagram](image)
5. ![Domino diagram](image)
6. ![Domino diagram](image)

Go Further
Student page 4 Have children answer the questions in Go Further on student page 4.

Answers for student page 4: 7. 6 8. 2

Assessment
Student self-assessment page 4 Have the children circle one of the three choices to describe how they feel about this activity. The children may need some assistance when reading the choices.

Assessment tip Can the children identify the domino halves for the numbers 1–9?


Materials
Student page 5
Classroom objects
Blank paper

Concept
Identify a picture of a set with a numeral.

Get Started
Display various sets of three to ten like objects for the children to count. Ask a volunteer to write the number that corresponds with each set on the chalkboard. Repeat the activity several times.

Student page 5 To introduce the activity, work through the first problem on student page 5. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (3) is wrong because “there are more than 3 stars in the box.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (4) is correct.

Today’s Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 5 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 5: 1. 6 2. 9

When all children’ papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 5 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children identify the number of objects in the set?
Materials
Student page 6
Crayon

Concept
Sort objects by size.

Background
Early classification tasks include sorting objects by color, size, and shape. Objects may be categorized as *large* (big) or *small* (little). Using actual objects, students can physically compare the size. Using pictures of objects involves some background information the children must have about the objects. For example, a truck may look small in a picture compared to a teddy bear in another picture. Realistically, however, a truck is larger than a stuffed teddy bear.

Get Started
Show some large and small objects to children, such as a chair, table, book, pencil, or cup. Ask:
- Which objects are large (big)? (chair, table)
- Which objects are small (little)? (book, pencil, cup)

Show some pictures of large and small objects that look about the same size, such as a large truck, building, teddy bear, and pair of shoes. You may wish to discuss the fact that things may look the same size in pictures, but in real life, the objects are really different sizes.
- Which objects are large? (large truck, building)
- Which objects are small? (teddy bear, pair of shoes)

Today's Challenge
Student page 6 Have children complete the activity on the student page.

Answers for student page 6: 1. Children should color the large buttons and draw lines from the small buttons to the jar.

Student page 6 Have children complete the activity on the student page. Remind the children to think about how the objects look in real life.

Answers for student page 6: 2. Small: camera, flower, ring, glasses, book; large: elephant, tree, house

Assessment
Student self-assessment page 6: Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can students sort objects by size?
Math Maze

Week 2 • Activity 7

Materials
Student page 7
Math Maze cards (Week 2 Activity 7)
One crayon or marker

Concept
Find more, fewer, or the same number of objects.

Background
Children can draw lines or pair up objects to make a one-to-one correspondence between two sets of objects in order to tell whether both sets have the same number of objects or if one set has more objects than the other.

Get Started
Review the concepts same, more, and fewer with children.

Draw a group of 3 small circles in a row. Then draw 3 stars in a row under the row of circles. Draw a line from a circle to a star to show that the 3 circles match the 3 stars in a one-to-one correspondence.

There is the same number of circles and stars.

Draw a group of 3 small circles in a row. Then draw 5 stars in a row under the row of circles. Draw a line from a circle to a star to show that the 3 circles match 3 stars with 2 stars left over.

There are more stars than circles.
There are fewer circles than stars.

Today's Challenge
Distribute the 18 Math Maze cards for Week 2. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, "Who has the card with the answer to the question just read?" Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child's card. Tell children to pay attention to the particular animal on each card. For example, if some one asks "Who has more than ?" The response must be in terms of ducks. (I have ducks.) The answer 7 dogs or 6 fish is incorrect. Since all the answers are pictures, children can describe the picture or draw it on the board.

The correct sequence of questions and answers is shown on page 182.

Student page 7 When the group has finished playing the game, have children open their books and complete the Today's Challenge activity on page 7 in the student book.

Answers for student page 7: 1–3: Make sure children draw lines to match the objects in one row with the objects in the other row. The row with objects left over has more objects. 1. Color the row of bones. 2. Color the row of bees. 3. Color the row of balls.

Go Further
Student page 7 Have children complete this section on the student page.

Answers for student page 7: Have the children count the 4 circles shown. To show more circles, draw at least 5 circles. To show fewer circles, draw 1, 2, or 3 circles. To show the same number of circles, draw 4 circles.

Assessment
Student self-assessment page 7 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children understand the concepts of more, fewer, and same?
Materials
Student page 8
Blank paper

Concept
Review attributes of geometric shapes.

Get Started
To review names of shapes, copy these figures on the board. Ask children to name the shapes. Then write the name of the figures below them.

squares  circles  rectangles

Have children lie on the floor and together use their bodies to make these three shapes.

Ask: “What did you have to do with your bodies to make these shapes?”

(A square has to have four equal sides, a circle has to be curved with no straight sides, and a rectangle has to have four sides.)

Today’s Challenge
Explain that today you will be playing a game called “Who Wants to be the Top Scorer?” Take blank pieces of paper and draw one of these shapes on each piece of paper. Make sure the square and the rectangle look significantly different. Have each child choose a shape. Then ask children to number their papers from 1 to 4.

As you ask each of four questions, have children look at their shapes and answer the question. If their answer is yes, then they are to make a checkmark. If their answer is no, they are to draw a dash. Each yes answer, or checkmark, will score a point. Here are the questions to ask:

1. Is your shape without straight sides? If yes, make a checkmark.
2. Does your shape have four equal sides? If yes, make a checkmark.
3. Does your shape have the same shape as a wheel? If yes, make a checkmark.
4. Does your shape have two sides longer than the other two sides? If yes, make a checkmark.

Top scorer(s) will have a circle.

Have children find their total scores by counting their checks. Ask a volunteer to show his or her drawing and explain the score.

Go Further
Student page 8 Have children draw the correct shape under the name and create a picture from each shape. See example.

Answers for student page 8: Check to see if children are drawing the correct shapes.

Assessment
Student self-assessment page 8 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children understand the attributes of a circle?
Materials
Student page 9
Math Jumble activity poster and 2 sets of 1–8 domino cards

Concept
Recognize equal amounts.

Background
Children need to be able to visually match equal amounts.

Get Started
Begin by explaining equal amounts. Remind children that two domino halves can have equal amounts even if one card has been turned. Demonstrate with the two domino half. Hold up the two card and have a volunteer identify it. Then rotate the card 90° and ask another volunteer to identify the card in the new orientation. Repeat with the three card and the six card.

Today's Challenge
Using two sets of 1–8 domino cards, construct the 4 by 4 poster shown. Explain that the object of today's Math Jumble is to match equal domino halves. Point to each domino and have the children identify them.

Student page 9 Have children complete the Today's Challenge section of student page 9.

Answers for student page 9:
1. [Image of dominoes]
2. [Image of dominoes]
3. [Image of dominoes]
4. [Image of dominoes]
5. [Image of dominoes]
6. [Image of dominoes]
7. [Image of dominoes]
8. [Image of dominoes]

Go Further
Student page 9 Have children complete the activity in this section of the student book.

Answers for student page 9:
9. [Image of dominoes]

Assessment
Student self-assessment page 9 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children match the equal domino halves?
Materials
Student page 10
Classroom objects
Blank paper

Concept
Identify the addition symbol.

Get Started
Give one child three paper clips and another child three paper clips. Ask the children: How or what can be done to figure out how many paper clips the two children have in all? Elicit the idea of counting the paper clips. Write the number sentence $3 + 3 = \Box$ on the chalkboard. Explain that the number sentence, specifically the addition symbol, is the mathematical representation of putting the paper clips together. Solve the equation. Repeat this activity using other concrete objects before proceeding to the student page.

Student page 10 To introduce the activity, work through the first problem on student page 10. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say $(3 - 2 = \Box)$ is wrong because “that is not a plus (addition) sign.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why $(2 + 3 = \Box)$ is correct.

Today’s Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 10 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 10: 1. $2 + 1 = \Box$
2. $5 + 2 = \Box$

When all children’s papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 10 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children identify the addition symbol?
Materials
Student page 11

Concept
Recognize and extend an AB linear pattern using two sizes—large and small.

Background
Often patterns are based on meaningful arrangements of objects or events. In mathematics, many patterns are based on sequences of numbers or objects that repeat. The ability to recognize sequence and repetition is an important thinking skill. By working with patterns, students sharpen their perception and develop awareness of order, sequence, and various properties such as shape, color, and size.

Get Started
Draw the pattern shown below on the chalkboard. Then ask the children these questions:
• What figures are in the pattern? (large and small circles)
• What is the rule for this pattern? (large, small, . . .)
• Which size circle comes next in this pattern? (large circle)
• Which size circle comes after that one? (small circle)

\[
\begin{array}{cccc}
\bigcirc & \bigcirc & \bigcirc & \bigcirc \\
\end{array}
\]

Ask a volunteer copy the pattern below the one drawn on the chalkboard.

Today's Challenge
Student page 11 Have children complete the activity on the student page.

Answers for student page 11:
1. \[
\begin{array}{c}
\bigcirc \\
\bigcirc \\
\bigcirc \\
\end{array}
\]
2. \[
\begin{array}{c}
\square \\
\square \\
\square \\
\end{array}
\]
3. \[
\begin{array}{c}
\bigtriangleup \\
\bigtriangleup \\
\bigtriangleup \\
\end{array}
\]
4. \[
\begin{array}{c}
\square \\
\square \\
\square \\
\end{array}
\]

Go Further
Student page 11 Have children complete the activity on the student page. Remind children to check their completed patterns to make sure they have drawn the correct missing bead.

Answers for student page 11:
5. \[
\begin{array}{c}
\square \\
\square \\
\square \\
\end{array}
\]
6. \[
\begin{array}{c}
\bigtriangleup \\
\bigtriangleup \\
\bigtriangleup \\
\end{array}
\]

Assessment
Student self-assessment page 11 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can students recognize and extend an AB linear pattern using two sizes—large and small?
Materials
Student page 12
Math Maze cards (Week 3 Activity 12)

Concept
Identify two-dimensional shapes.

Get Started
Review with children the name of each shape. Also have them observe the number of sides and corners each shape has.

<table>
<thead>
<tr>
<th>Shape</th>
<th>Sides</th>
<th>Corners</th>
</tr>
</thead>
<tbody>
<tr>
<td>square</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>rectangle</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>triangle</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>circle</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>hexagon</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

Look around the room for the different shapes and ask children to name the shape. For example:

What shape is the front of your math book? (rectangle)
What shape is the tile on the floor (ceiling)? (square)
What shape is a plate? (circle)
What shape is a folded handkerchief (napkin)? (triangle)
What shape is the yellow pattern block? (hexagon)

Today’s Challenge
Distribute the 18 Math Maze cards for Week 3. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze
Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child’s card. Some answers are pictures. In that case, children can describe the picture or draw it on the board.

Note: When the question asks for a picture of a shape the answer card will show the outline of a simple geometric shape. When the question asks for an object the answer card will show a sketch of some familiar object with the specified shape.

The correct sequence of questions and answers is shown on page 183.

Student page 12 When the group has finished playing the game, have children open their books and complete the Today’s Challenge activity on page 12 in the student book.

Answers for student page 12: 1. 2. 3. 4. 5.

Go Further
Student page 12 Have children complete this section on the student page.

Answers for student page 12: 6. Answers will vary.

Assessment
Student self-assessment page 12 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children identify two-dimensional shapes and real life objects containing them?
Game Time

Week 3•Activity 13

Materials
Student page 13
Blank paper

Concept
Review attributes of geometric shapes.

Get Started
To review names of shapes, copy these figures on the board. Ask children to name the shapes. Then write the name of the figures below them.

- Squares
- Circles
- Triangles

Have children lie on the floor and together use their bodies to make these three shapes.

Ask: “What did you have to do with your bodies to make these shapes?” (A square has to have four equal sides, a circle has to be curved with no straight sides, and a triangle has to have three sides.)

Today’s Challenge
Explain that today you will be playing a game called “Who Wants to be the Top Scorer?” Take blank pieces of paper and draw one of these shapes on each piece of paper. Have each child choose a shape. Then ask children to number their papers from 1 to 4.

As you ask each of four questions, have children look at their shapes and answer the question. If their answer is yes, then they are to make a checkmark. If their answer is no, they are to draw a dash. Each yes answer, or checkmark, will score a point. Here are the questions to ask:

1. Does your shape have four sides? If yes, make a checkmark.
2. Does your shape have three sides? If yes, make a checkmark.
3. Does your shape have the same shape as a clock? If yes, make a checkmark.
4. Does your shape have three corners? If yes, make a checkmark.

Top scorer(s) will have a triangle.

Have children find their total scores by counting their checks. Ask a volunteer to show his or her drawing and explain the score.

Go Further
Student page 13 Have children complete the chart on the student page.

Answers for student page 13: □, square, 4 sides; ○, circle, 0 sides; △, triangle, 3 sides

Assessment
Student self-assessment page 13 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children understand the attributes of a triangle?
Materials
Student page 14
Math Jumble activity poster and 1–9 domino cards

Concept
Recognize a number that is one more than another.

Background
"Number neighbors" are numbers that are one more or one less than the other. For example, 4 and 5 are neighbors because 4 is one less than 5, and 5 is one more than 4.

Get Started
Begin by explaining number neighbors. Give the children a few examples of neighbors (3 and 4, 5 and 6) then allow them to give examples. Write the examples on chart paper or on the board.

Today’s Challenge
Using the 1–9 domino cards, construct the 4 by 4 poster shown. Explain that the object of today’s Math Jumble is to find as many adjoining (side to side or top to bottom) number neighbors as possible. Record the neighbors the children discover.

(Possible answers; horizontally: 4 and 3, 1 and 2, 8 and 7, 3 and 2, 6 and 5; vertically: 7 and 6, 3 and 2, 5 and 4, and 2 and 3, 8 and 9, 7 and 6, 2 and 1)

Student page 14 Have the children loop pairs of adjoining number neighbors.

Answers for student page 14: 1. horizontally: 4 and 3, 1 and 2, 8 and 7, 3 and 2, 6 and 5; vertically: 7 and 6, 3 and 2, 5 and 4, and 2 and 3, 8 and 9, 7 and 6, 2 and 1.

Go Further
Student page 14 Have children complete the activity in this section of the student page.

Answers for student page 14: 2. 5 3. 8 4. 3 5. 3 6. 6 7. 1

Assessment
Student self-assessment page 14 Have the children circle one of the three choices to describe how they feel about the activity.

Assessment tip Can the children recognize numbers that are neighbors?
Rule Out Two

Materials
Student page 15
Blank paper

Concept
Identify the heaviest object.

Get Started
Display a variety of classroom objects with very different weights. Ask children to identify the heaviest and lightest objects. Then have the group sequence sets of three objects from lightest to heaviest and heaviest to lightest.

Student page 15 To introduce the activity, work through the first problem on student page 15. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (a dollar) is wrong because “a book is heavier than a dollar.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (a computer) is correct.

Today's Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 15 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 15: 1. the bicycle 2. the dog

When all children’s papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 15 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children identify the heaviest object of a set?
Materials
Student page 16

Concept
Recognize and extend an AABB linear pattern using two sizes—large and small.

Get Started
Draw the pattern shown on the chalkboard.

Then ask the children these questions:
• What figures are in the pattern? (large and small squares)
• What is the rule for this pattern? (large, large, small, small, . . .)
• Which square comes next in this pattern? (large square)
• Which square comes after that one? (large square)
• Which square comes after that one? (small square)

Ask a volunteer to copy the pattern below the one drawn on the chalkboard.

Today’s Challenge
Student page 16 Have children complete the activity on the student page.

Answers for student page 16:
1. □□□□
2. ○○○○
3. □□□□
4. △△△△

Go Further
Student page 16 Have children complete the activity on the student page.

Answers for student page 16:
5. □□□□

Assessment
Student self-assessment page 16 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can students recognize and extend an AABB linear pattern using two sizes—large and small?
Materials
Student page 17
Math Maze cards (Week 4 Activity 17)

Concept
Represent numbers 1 through 10 more than one way using the same model.

Get Started
Familiarize the children with a set of dominoes through double sixes. Any one of the three dominoes below represents the number 5. The total number of dots on each domino is 5.

Today's Challenge
Distribute the 18 Math Maze cards for Week 4. Each should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child’s card. Some answers are pictures. In that case, children can describe the picture or draw it on the board.

The correct sequence of questions and answers is shown on page 184.

Student page 17 When the group has finished playing the game, have children open their books and complete the Today’s Challenge activity on page 17 in the student book.

Answers for student page 17:
1. 

2. 

3. 

4. 

5. 

6. 

Go Further
Student page 17 Have children complete this section on the student page.

Answers for student page 17: The four possible different dominoes that represent the number 6 are shown.

Note: 

Assessment
Student self-assessment page 17 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children understand that a number can be represented more than one way by the same model (in this case, dominoes)?
**Materials**
Student page 18
Blank paper

**Concept**
Review attributes of geometric shapes.

**Get Started**
To review names of shapes, copy these figures on the board. Ask children to name the shapes, and then write the name of the figures.

- squares
- circles
- triangles

Have children lie on the floor and together use their bodies to make these three shapes.

Ask: “What did you have to do with your bodies to make these shapes?”

(A square has to have four equal sides, a circle has to be curved with no straight sides, and a triangle has to have three sides.)

**Today's Challenge**
Explain that today you will be playing a game called “Who Wants to be the Top Scorer?” Take blank pieces of paper and draw one of these shapes on each piece of paper. Have children choose their shapes. Then ask children to number their papers from 1 to 4.

As you ask each of four questions, have children look at their shapes and answer the question. If their answer is yes, then they are to make a checkmark. If their answer is no, they are to draw a dash. Each yes answer, or checkmark, will score a point. Here are the questions to ask:

1. Does your shape have four corners? If yes, make a checkmark.
2. Does your shape have three sides? If yes, make a checkmark.
3. Does your shape have the same shape as a whole pizza? If yes, make a checkmark.
4. Does your shape have four equal sides? If yes, make a checkmark.

Top scorer(s) will have a square.

Have children find their total scores by counting their checks. Ask a volunteer to show his or her drawing and explain the score.

**Go Further**
**Student page 18** Have children complete the chart on the student page.

**Answers for student page 18:** □, square, 4 sides; ○, circle, 0 sides; △, triangle, 3 sides

**Assessment**
**Student self-assessment page 18** Have children circle one of the three choices to describe how they feel about this activity.

**Assessment tip** Do children understand the attributes of a square?
Materials
Student page 19
Math Jumble activity poster and 1–9 domino cards

Concept
Recognize a number that is one less than another number.

Background
“Number neighbors” are consecutive numbers.

Get Started
Begin by explaining number neighbors. Give the children a few examples of neighbors (2 and 3, 6 and 7.) Allow them to give examples and write these on the chalkboard.

Today’s Challenge
Using the 1–9 domino cards, construct the 4 by 4 poster shown. Explain that the object of today’s Math Jumble is to find as many “one-less neighbors” as possible.

Answers: 1 is one less than 2, 2 is one less than 3, 3 is one less than 4, 4 is one less than 5, 5 is one less than 6, 6 is one less than 7.

Student page 19 Have children complete Today’s Challenge on student page 19.

Answers for student page 19:
1.

Go Further
Student page 19 Have children complete the activity in this section of the student book.

Answers for student page 19: 2. 1 and 2, 2 and 3, 3 and 4, 4 and 5, 5 and 6, 7 and 8, 8 and 9. (The neighbors 6 and 7 are not in the jumble.)

Assessment
Student self-assessment page 19 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children recognize amounts that are one less than another?
Rule Out Two

Materials
Student page 20
Blank paper

Concept
Identify positions over, under, and between.

Get Started
Refer to objects in the classroom to lead a discussion of position using the terms over, under, and between. For example, stack a book on top of a tissue box and place a sheet of paper on top of the book. Then ask, what is between the paper and the tissue box? (the book) What is under the book? (the tissue box) What is under the paper? (the book and the tissue box) What is over book? (the paper)

Student page 20 To introduce the activity, work through the first problem on student page 20. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (the cup) is wrong because “the cup is at the top; it isn’t between anything.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (basketball) is correct.

Today’s Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 20 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 20: 1. hat 2. cupcake
When all children’ papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 20 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children identify the positions over, under, and between?
Materials
Student page 21
Red, green, blue, and yellow crayons or markers

Concept
Sort objects by shape.

Get Started
Draw a collection of 6 or 7 shapes on the board.
Then ask these questions:

- Which shapes do you see? (circle, square, triangle)
- Who can shade all the circles?
- Who can draw a ring around all the triangles?
- Who can draw an X on all the rectangles?
- Which shapes are left? (squares)

Today’s Challenge
Student page 21 Have children complete the activity on the student page.

Answers for student page 21: 1. circles, red
2. triangles, green
3. squares, blue
4. rectangles, yellow

Go Further
Student page 21 Have children complete the activity on the student page. Tell children that they should look for the circles, squares, triangles, and rectangles in the picture. Then they should color each shape in the picture the same color that they used above to color that shape.

Answers for student page 21: 5. Children should color the circles red, the triangles green, the squares blue, and the rectangles yellow.

Assessment
Student self-assessment page 21 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children sort objects by shape?
Math Maze

Week 5 • Activity 22

Materials
Student page 22
Math Maze cards (Week 4 Activity 22)

Concept
Represent numbers 1 through 10 using two different models.

Get Started
Review with children how the filled parts on a ten grid tells how many. The ten grid at the right represents the number 3.

Familiarize the children with a set of dominoes through double fives. Either domino below represents the number 5. The total number of dots on each domino is 5.

Today's Challenge
Distribute the 18 Math Maze cards for Week 4. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child’s card. Some answers are pictures. In that case, children can describe the picture or draw it on the board.

The correct sequence of questions and answers is shown on page 185.

Student page 22 When the group has finished playing the game, have children open their books and complete the Today's Challenge activity on page 22 in the student book.

Answers for student page 22:
1. 7 and

2. 4 and

3. 5 and

4. 9 and

5. 3 and

6. 8 and

Go Further
Student page 22 Have children complete this section on the student page.

Answers for student page 22: The three different dominoes that represent 5 are shown.

Note: and are considered to be the same.

Assessment
Student self-assessment page 22 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children understand that a number may be represented in different ways?
Materials
Student page 23

Concept
Review attributes of geometric shapes.

Get Started
To review names of shapes, copy these figures on the board. Ask children to name the shapes. Then write the name of the figures below them.

- squares
- circles
- triangles
- rectangles

Have children lie on the floor and together use their bodies to make these three shapes.

Ask: “What did you have to do with your bodies to make these shapes?”

(A square has to have four equal sides, a circle has to be curved with no straight sides, a triangle has to have three sides, and a rectangle has to have four sides.)

Today’s Challenge
Student page 23 Explain that today the class will be playing a game called “Fantastic Finalist.” Have the children ring the shape on their student page they want to use in the game.

Have all children hold their paper and stand in a large circle. Explain that the object of the game is to be the “Fantastic Finalist,” the last child to remain standing.

Read each of the following challenges one at a time.

- If your shape has four equal sides, sit down. (square)
- If your shape is shaped like a wheel, sit down. (circle)
- If your shape has four corners, sit down. (rectangle)

At this point, only the children who chose the triangle should still be standing. Those children are the Fantastic Finalists.

Go Further
Student page 23 Have children complete the activity on the student page. Read the clues to the children.

Cross out the circles.
Cross out the shapes that have four sides.
Cross out the heart shape.
Cross out the shape with five sides.
Circle the shapes that are left.

Answers for student page 23: 1. triangles 2. three sides.

Assessment
Student self-assessment page 23 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children understand the attributes of a triangle?
Materials
Student page 24
Math Jumble activity poster and 0–4 domino cards

Concept
Use domino cards to make addition facts with sums to 4.

Get Started
Begin by brainstorming addition facts with sums of 2, 3, and 4. Using the 0–4 domino cards, have one child pull a card, and let another child call out an addend to make a sum of 2, 3, or 4. For example, if one child pulls a 2-dominio card, another child might call out “1” or “2” because $2 + 1 = 3$ and $2 + 2 = 4$. The children may also use more than one addend to make a number. For example, if a 1-dominio card is chosen, a child might call out, “1 and 2” because $1 + 1 + 2 = 4$. Write all of the equations on the chalkboard as they are called out.

Today’s Challenge
Using the 0–4 domino cards, construct the 3 by 3 poster shown. Explain that the object of today’s Math Jumble is to make as many addition facts as possible with sums of 2, 3 and 4. Fact equations can be made by adding any adjoining numbers (top to bottom or left to right) from the poster. Dominoes on the poster can be used more than once, but the sum must be 2, 3, or 4. Record the facts the children make. Possible facts are given.

<table>
<thead>
<tr>
<th>Sum of 2</th>
<th>Sum of 3</th>
<th>Sum of 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2 + 0 = 2$</td>
<td>$3 + 0 = 3$</td>
<td>$0 + 4 = 4$</td>
</tr>
<tr>
<td>$1 + 1 = 2$</td>
<td>$2 + 1 = 3$</td>
<td>$1 + 3 = 4$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$2 + 2 = 4$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$2 + 1 + 1 = 4$</td>
</tr>
</tbody>
</table>

Student page 24 Then have the children use the Math Jumble on student page 24 to find facts with sums 2, 3, and 4.

Answers for student page 24:
1.

<table>
<thead>
<tr>
<th>Sum of 3</th>
<th>Sum of 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3 + 0 = 3$</td>
<td>$0 + 4 = 4$</td>
</tr>
<tr>
<td>$2 + 1 = 3$</td>
<td>$2 + 2 = 4$</td>
</tr>
<tr>
<td></td>
<td>$2 + 1 + 1 = 4$</td>
</tr>
</tbody>
</table>

Go Further
Student page 24 Using the grid on the page 24, have each child create a Math Jumble to share with a friend.

Answers for student page 24: 3. Answers will vary, but should include sums to 4.

Assessment
Student self-assessment page 24 Have the children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children recognize sums of 2, 3 and 4?
Rule Out Two

Week 5•Activity 25

Materials
Student page 25
Blank paper

Concept
Demonstrate an understanding of one-to-one correspondence.

Get Started
Display various sets of three to ten like objects for the children to count. Have a volunteer write the number that corresponds with each set on the chalkboard. Draw or display dominoes. Provide time to practice counting the dots on the dominoes before proceeding with the student page.

Student page 25 To introduce the activity, work through the first problem on student page 25. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (4) is wrong because “there are more than 4 dots on the domino.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (7) is correct.

Today’s Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Then explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 25 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 25: 1. 8  2. 6
When all children’ papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 25 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children count dots on a domino to demonstrate an understanding of one-to-one correspondence?
Materials
Student page 26

Concept
Recognize and extend an AB linear pattern using two shapes.

Get Started
Draw the pattern shown below on the chalkboard. Then ask children the following questions:

○ □ ○ □ ○ □

• What shapes are in the pattern? (circle and square)
• What is the rule for this pattern? (circle, square, . . .)
• Which shape comes next in this pattern? (circle)
• Which shape comes after that one? (square)
• Ask a volunteer to copy the pattern below the one drawn on the chalkboard.

Today's Challenge
Student page 26 Have children complete the activity on the student page.

Answers for student page 26:
1. □ ○ □ ○
2. △ □ △ □
3. □ △ □ △
4. △ ○ △ ○
5. □ □ □ □

Go Further
Student page 26 Have children complete the activity on the student page.

Answers for student page 26:
6.

Assessment
Student self-assessment page 26 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can students recognize and extend an AB linear pattern using two shapes?
Materials
Student page 27
Math Maze cards (Week 6 Activity 27)
Red, blue, and yellow crayons or markers

Concept
Identify ordinal positions first (1st) through tenth (10th).

Background
Children should know how to count from 1 through 10 in order to locate ordinal positions 1st through 10th.

Get Started
Line up 4 children in a row, one in front of another. Have children identify who is first, second, third, and fourth. Then have them make a half turn and identify who is first through fourth again. This time, the child who was first in line last time is now fourth in line.

Review the words and abbreviations (“short words”) with children.

\[
\begin{array}{cccc}
1\text{st} & 2\text{nd} & 3\text{rd} & 4\text{th} \\
6\text{th} & 7\text{th} & 8\text{th} & 9\text{th} & 10\text{th}
\end{array}
\]

Ask children for the position of balls or circles in a row, starting from the left.

\[
\begin{array}{cccccccccccc}
&&&&&&&&&&&\\
\bigcirc&\bigcirc&\bigcirc&\bigcirc&\bigcirc&\bigcirc&\bigcirc&\bigcirc&\bigcirc&\bigcirc&\bigcirc&\bigcirc
\end{array}
\]

In which position is the shaded ball? (fourth or 4th)
Where would you put the shaded ball to be second in line?

\[
\begin{array}{cccccccccccc}
\bigcirc&\bigcirc&\bigcirc&\bigcirc&\bigcirc&\bigcirc&\bigcirc&\bigcirc&\bigcirc&\bigcirc&\bigcirc&\bigcirc
\end{array}
\]

Today’s Challenge
Distribute the 18 Math Maze cards for Week 6. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child’s card. Some answers are pictures. In that case, children can describe the picture or draw it on the board.

Note: The positions for the balls shown on the cards start at the left.
The correct sequence of questions and answers is shown on page 186.

Student page 27 When the group has finished playing the game, have children open their books and complete the Today’s Challenge activity on page 27 in the student book.

Answers for student page 27: 1. first red, third yellow, fourth blue 2. 2nd yellow, 5th red, 8th blue

Go Further
Student page 27 Have children complete this section on the student page.

Answers for student page 27: 3–4. Balloons should be blue, red, yellow, blue, red, yellow, blue, red, yellow, yellow. 5. 3rd, 6th, 9th, 10th

Assessment
Student self-assessment page 27 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children identify the ordinal positions first through tenth for objects placed in a line?
Materials
Student page 28
Blank paper

Concept
Review numbers less than ten.

Get Started
Write numbers one through nine on the board.
Have children count along as you write the numbers.

1 2 3 4 5 6 7 8 9

Student page 28 Have children use the information on the board to answer the questions in the Get Started section of page 28 in their books.

Answers for student page 28: 1. yes, no, yes 2. yes, no, no.

Today's Challenge
Explain that today you will be playing a game called "Who Wants to be the Top Scorer?" Have each child take a blank sheet of paper and write a number less than ten on the top of the paper. Then ask children to number their papers from 1 to 5.

As you ask each of five questions, have children look at their number and answer the question. Yes answers will score a tally point. Here are the questions to ask:

1. Is your number more than the fingers on one hand? If yes, score one tally point.
2. Is your number less than \(3 + 2\)? If yes, score one tally point.

3. Does your number tell how many hands you have? If yes, score two tally points.
4. Does your number come after 4? If yes, score 2 tally points.
5. Is your number one more than 7? If yes, score 3 tally points.

Have children find their total scores. Determine which child has the highest score. Have that child write their number on the board and explain how he or she scored the points.

Go Further
Student page 28 Have children solve the riddle and create another riddle for a friend to solve. Have the solver sign his or her name.

Answers for student page 28: 3. 4 4. Answers will vary.

Assessment
Student self-assessment page 28 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children recognize numbers less than ten?
Math Jumble

Week 6•Activity 29

Materials
Student page 29
Math Jumble activity poster, 1–5 digit cards, and 1–4 penny cards

Concept
Recognize value of coins and match them with numerals.

Get Started
Begin by reviewing what the children know about a penny. (It is worth one cent, it is brown, it is shiny and almost orange when it is new, it has the head of Abraham Lincoln on one side, and so forth.) Then remind the children that they can count to find the value of a group of pennies. Ask the children, "How much is two pennies worth?" (2 cents) "How much is four pennies worth?" (4 cents)

Today's Challenge
Using the 1–5 digit cards and the 1–4 penny cards, construct the 3 by 3 poster shown. Explain that the object of today's Math Jumble is to match the coin cards with the digit cards. Point to each coin card and have the children identify the matching numeral card.

Student page 29 Have children complete Today's Challenge on student page 29.

Answers for student page 29:
Students should draw the corresponding coin card to go with each number.

1. 2. 3. 4.

Go Further
Student page 29 Have children complete the activity in this section of the student book.

Answers for student page 29:

5.

Assessment
Student self-assessment page 29 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children draw the correct number of pennies to match the number?
Materials
Student page 30
Blank paper

Concepts
Identify a number sentence that does not equal a given sum.
Identify sums of 4 and 5.

Get Started
Write the chart shown on the chalkboard. Ask the children to solve the number sentences one by one and find the number sentence that does not equal 3. Work through the equations with the children. Draw pictures or display concrete objects to demonstrate each problem.

Student page 30 To introduce the activity, work through the first problem on student page 30. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers.

Explain to the children that for today’s first questions they will be choosing the answer that does not equal four. Therefore, in order to rule out an answer, the first step is to look for one that does equal four.

Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say $(2 + 2 = 4)$ is wrong because “$2 + 2$ does equal 4.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why $(2 + 3 = 5)$ is correct.

Today’s Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 30 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 30: 1. $1 + 1 + 1 = 3$
2. $3 + 3 = 6$
When all children’ papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 30 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children identify number sentences that do not meet particular criteria?
Materials
Student page 31

Concept
Recognize and extend an AAB pattern with two shapes.

Background
By having children recognize a repeating basic pattern unit, they can use the base unit to extend a linear pattern. They can also substitute other shapes or figures to show the same pattern.

Get Started
Draw the pattern shown below on the chalkboard.

○ ○ △ ○ ○ △ ○ ○ △

Then ask children the following questions:
• What shapes are in this pattern? (circle and triangle)
• What is the rule for this pattern? (circle, circle, triangle pattern)
• Can someone copy this pattern below the one drawn on the chalkboard?
• Can someone draw the next three shapes for this pattern? (circle, circle, triangle)
• Can someone draw the next shape after that one? (circle)

Ask a volunteer to draw the same type of pattern using two other different shapes or figures. (possible response: square, square, star)

Today's Challenge
Student page 31 Have children complete the activity on the student page.

Answers for student page 31:
1. □ □ △ □
2. △ △ ○ △
3. □ □ △ □

Go Further
Student page 31 Have children complete the activity on the student page. Remind children that they should look closely at the pattern shown and then repeat it using two different shapes.

Answers for student page 31: 4. Answers will vary.
Possible answers to show an AAB pattern: circle, circle, square; star, star, heart; or circle, circle, star.

Assessment
Student self-assessment page 31 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can students recognize and extend an AAB pattern using two shapes?
Materials
Student page 32
Math Maze cards (Week 7 Activity 37)

Concept
Recognize small sets of dots quickly, without counting, if possible.

Get Started
Draw a large domino outline on the board. Fill in some dots on both sides of the domino out of sight of the children and cover it up. Tell the children to pay close attention to the number of dots on both sides of the domino when you uncover it for only a few seconds. Uncover the domino for a few seconds and then cover it up again. Ask children to name the number of dots for each side of the domino.

This task works well on the overhead projector, if one is available. You can make a few transparencies ahead of time and then flash them on and off.

Today's Challenge
Distribute the 18 Math Maze cards for Week 7. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child's card. Each time the game is played, challenge children to identify the answer card as fast as they can.

The correct sequence of questions and answers is shown on page 187.

Student page 32 When the group has finished playing the game, have children open their books and complete the Today's Challenge activity on page 32 in the student book.

Answers for student page 32: 1. 3 and 1 2. 1 and 4 3. 2 and 2 4. 3 and 2 5. 6 and 1 6. 2 and 4 7. 5 and 2 8. 1 and 2 9. 6 and 4 10. 4 and 3

Go Further
Student page 32 Have children complete this section on the student page.

Answers for student page 32:
11. 
12. 
13. 

Assessment
Student self-assessment page 32 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children recognize the number of dots instantly for domino halves with 6 dots or less?
Materials
Student page 33
Items in the room

Concepts
Explore relative weight.
Practice using the terms heavier and lighter.

Get Started
Use objects in the room to review relative weight.
For example compare the weight of a desk to the weight of a box of crayons, or the weight of a pencil to the weight of a chair. Ask which is heavier than the other, and which is lighter than the other.

Today's Challenge
Student page 33 Explain that today you will be playing a game called “Who Wants to be the Top Scorer?” Have children loop the object on the student page that they will be using to play the game.

As you ask each of four questions, have children look at their objects and answer the question. If their answer is yes, then they are to make a checkmark. Each yes answer, or checkmark, will score a point. Here are the questions to ask:

1. Is your object heavier than a penny? If yes, make a checkmark.
2. Is your object light enough to carry in your backpack? If yes, make a checkmark.
3. Is your object heavier than a refrigerator? If yes, make a checkmark.

Top scorer(s) will have a pencil.
Have children find their total scores by counting their checks. Ask a volunteer to name his or her object and explain the score.

Go Further
Student page 33 Using the chart on the student page, have children ring all of the items heavier than a student chair and box all the items lighter than a student chair.

Answers for student page 33: lighter than a chair: feather, juice box, CD disc, book; heavier than a chair: child, television, car, bed.

Assessment
Student self-assessment page 33 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children understand relative weight?
Materials
Student page 34
Math Jumble activity poster and 1–8 coin cards

Concepts
Use pennies and a nickel to recognize one more and one less.
Evaluate coin combinations up to eight cents.

Get Started
Begin by brainstorming numbers that are one more or one less than each other. It may be helpful to give some examples before asking the children to share some of their own. For example, 4 is one less than 5, or 7 is one more than 6. Write the responses on the chalkboard.

Show the children a penny card and ask them to identify it. Review some of the characteristics of a penny—it is round, it is brown, there’s a face on it (Abraham Lincoln), it is worth one cent, and so on. Then show the children the nickel card. Review some of its characteristics—it is round, it is silver, there is a face on it (Thomas Jefferson), it is worth five cents, and so on.

Today’s Challenge
Using the 1–8 coin combination cards, construct the 3 by 3 poster shown. Explain that the object of today’s Math Jumble is to find as many combinations of coins that are one more or one less than each other in adjoining squares. Record the facts the children make.

Possible answers: 1 cent is one less than 2 cents, 2 cents is one less than 3 cents, 4 cents is one less than 5 cents, 5 cents is one less than 6 cents, 7 cents is one less than 8 cents. Each answer is reversed to make “one more than” statements.

Student page 34 Have the children use the Math Jumble on student page 34 to find amounts that are one more or one less.

Answers for student page 34: 1–2. Possible answers: 2 cents is one cent more than 1 cent, 3 cents is one cent more than 2 cents, 5 cents is one cent more than 4 cents, 6 cents is one cent more than 5 cents, 7 cents is one cent more than 6 cents. 3–4. Possible answers: 1 cent is one cent less than 2 cents, 2 cents is one cent less than 3 cents, 4 cents is one cent less than 5 cents, 5 cents is one cent less than 6 cents, 7 cents is one cent less than 8 cents.

Go Further
Student page 34 Have children complete the activity in this section of the student page.

Answers for student page 34:

5. \[
\begin{array}{ccc}
\text{P} & \text{P} & \text{P} \\
\end{array}
\]

6. \[
\begin{array}{ccc}
\text{P} & \text{P} & \text{N} \\
\text{P} & \text{P} & \text{P} \\
\end{array}
\]

Assessment
Student self-assessment page 34 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tips Can children recognize one more and one less? Can children evaluate coin combinations up to eight cents?
Materials
Student page 35
Two or three containers
Blank paper

Concept
Investigate liquid capacity.

Get Started
Display two or three transparent or translucent containers of different sizes. Slowly fill one container at a time, stopping to discuss the concepts of half filled, full, and overflowing.

Student page 35 To introduce the activity, work through the first problem on student page 35. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (the full one) is wrong because “the measuring cup is full, but it is not overflowing.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (the overflowing measuring cup) is correct.

Today’s Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 35 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 35: 1. last cup
2. first cup
When all children’ papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 35 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children identify containers that are half full, full, and overflowing?
Materials  
Student page 36

Concept  
Recognize and extend an AABB pattern with two shapes.

Get Started  
Draw the pattern shown below on the chalkboard.

△ △ ○ ○ △ △ △ ○ ○  

Then ask children the following questions:
- What is the rule for this pattern? (triangle, triangle, square, square)
- Can someone copy this pattern below the one drawn on the chalkboard?
- Can someone draw the next four shapes for this pattern? (triangle, triangle, square, square)
- Can someone draw the next shape after that one? (triangle)

Then ask a volunteer to draw the same type of pattern using one shape in two sizes. (possible answer: large square, large square, small square, small square)

Today's Challenge  
Student page 36 Have children complete the activity on the student page.

Answers for student page 36:  
1. ○ ○ □ □  
2. □ □ △ △  
3. △ △ ○ ○  

Go Further  
Student page 36 Have children complete the activity on the student page. Remind children to look closely at the pattern and repeat it using one shape in two different sizes.

Answers for student page 36: 4. Answers will vary. Possible answers: small circle, small circle, large circle, large circle or large star, large star, small star, small star.

Assessment  
Student self-assessment page 36 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can students recognize and extend an AABB pattern with two shapes?
Materials
Student page 37
Math Maze cards (Week 8 Activity 37)

Concept
Identify and understand numbers between 10 and 20 as represented by numerals and models.

Background
Each of the numbers 11 through 19 can be represented using 10 and a one-digit number. For example, 13 is the same as “10 and 3 more.” This group of numbers is commonly known as the teen numbers, although 11 and 12 do not have the word teen in their number names.

Get Started
Use a ten grid and counters to show some of the numbers 11 through 19, such as the example at the right shown for the number 13.

```
  ● ● ● ● ● ● ● ● ●
  ● ● ● ● ● ● ● ● ●
  10 and _3_ more is 13. thirteen
```

Review with children the numerals and number names for numbers 11 through 19.
11 eleven 14 fourteen 17 seventeen
12 twelve 15 fifteen 18 eighteen
13 thirteen 16 sixteen 19 nineteen

Today's Challenge
Distribute the 18 Math Maze cards for Week 8. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child’s card. Some answers are pictures. In that case, children can describe the picture by saying “10 and 3 more” for the number 13, or draw the picture on the board.

The correct sequence of questions and answers is shown on page 188.

Student page 37 When the group has finished playing the game, have children open their books and complete the Today’s Challenge activity on page 37 in the student book.

Answers for student page 37: 1. 15, 10 and 5 more
2. 19, 10 and 9 more 3. 14, 10 and 4 more
4. 17, 10 and 7 more 5. 16, 10 and 6 more
6. 11, 10 and 1 more

Go Further
Student page 37 Have children complete this section on the student page.

Answers for student page 37: 7. 10 and 6, 16

Assessment
Student self-assessment page 37 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children understand that a number between 10 and 20 can be represented with 10 and a one-digit number?
Materials
Student page 38
Items in the room

Concepts
Explore relative length.
Practice using terms shorter and longer.

Get Started
Use everyday objects in the room to review length.
For example compare the length of a book to a paperclip, or a pencil to a child. Ask which is longer than the other and which is shorter than the other.

Today’s Challenge
Student page 38 Explain that today you will be playing a game called “Who Wants to be the Top Scorer?” Have children loop the object on the student page that they will be using to play the game.

As you ask each of four questions, have children look at their objects and answer the question. If their answer is yes, then they are to make a checkmark. Each yes answer, or checkmark, will score a point. Here are the questions to ask:
1. Is your object longer than an ant? If yes, make a checkmark.
2. Is your object shorter than a new pencil? If yes, make a checkmark.
3. Is your object longer than a banana? If yes, make a checkmark.
4. Is your object longer than your arm? If yes, make a checkmark.

Top scorer(s) will have a teacher’s desk.
Have children find their total scores by counting their checks. Ask a volunteer to name his or her object and explain the score.

Go Further
Student page 38 Using the chart on the student page, have children ring all of the items longer than their hand and box all the items shorter than a their hand (from wrist to fingertips).

Answers for student page 38: shorter than the child’s hand: paperclip, eraser, piece of gum, yo-yo; longer than their hand: teacher’s desk, book, computer, lunch tray.

Assessment
Student self-assessment page 38 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children understand relative length?
Materials
Student page 39
Math Jumble activity poster and 1–9 coin cards

Concept
Recognize money amounts that are one cent less than another.

Background
Neighbors are numbers that one more or one less than the other.

Get Started
Begin by reviewing the penny and nickel and explaining number neighbors. Give the children a few examples of neighbors (2 cents and 3 cents, 6 cents and 7 cents.) Allow them to give examples and write these on the chalkboard.

Today’s Challenge
Using the 1–9 coin cards, construct the 3 by 3 poster shown. Point to each card and have children call out the amount. Explain that the object of today’s Math Jumble is to find as many “one-less neighbors” in adjoining squares as possible. Record the “one-less neighbors” the children discover.

Possible “one-less neighbors”:
1¢ is one less than 2¢, 2¢ is one less than 3¢, 3¢ is one less than 4¢, 4¢ is one less than 5¢, 5¢ is one less than 6¢, 6¢ is one less than 7¢, 7¢ is one less than 8¢, and 8¢ is one less than 9¢.

Student page 39 Have children complete Today’s Challenge on student page 39.

Answers for student page 39:

1.  
2.  
3.  

4. or  
5. or  

6.  

Go Further
Student page 39 Have children complete the activity in this section of the student book.

Answers for student page 39: 7, 4, 8, 5, 9, 2, 10, 7

Assessment
Student self-assessment page 39 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children recognize coin amounts that are one less than another?
Materials
Student page 40
Blank paper

Concept
Identify positions over, under, and between.

Get Started
Write the capital letters P, W, D, and T on the chalkboard in a vertical column. Lead a discussion on the positions of the letters. Ask questions that require the children to distinguish among over, under, and between.

Student page 40 To introduce the activity, work through the first problem on student page 40. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (X) is wrong because “the letter X is not under itself.” (If members of the class do not agree with the volunteer's response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (N) is correct.

Today's Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today's activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 40 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 40 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 40: 1, 5 2, T
When all children' papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 40 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children identify the positions over, under, and between?
Materials
Student page 41
One or two crayons

Concept
Recognize and extend an AAAB pattern with two shapes.

Get Started
Draw the pattern shown below on the chalkboard. Then ask children the following questions:

\[ \triangle \triangle \bigcirc \triangle \triangle \bigcirc \triangle \triangle \bigcirc \]

- What is the rule for this pattern? (triangle, triangle, circle)
- Can someone copy this pattern below the one drawn on the chalkboard?
- Can someone draw the next four shapes for this pattern? (triangle, triangle, triangle, circle)
- Can someone draw the next shape after that one? (triangle)

Then ask a volunteer draw an AAAB pattern using one shape in two colors. (possible answer: all circles with every fourth circle colored)

Answers for student page 41:
1. \[ \bigcirc \bigcirc \bigcirc \square \]
2. \[ \triangle \triangle \triangle \bigcirc \]
3. \[ \square \square \square \triangle \]

Go Further
Student page 41 Have children complete the activity on the student page. Remind children that they should use only one shape, but two different colors to make an AAAB pattern.

Answers for student page 41: 4. Answers will vary. Possible answers: 8 squares with every fourth square colored, or a two-color pattern with every fourth square in the second color.

Assessment
Student self-assessment page 41 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can students recognize and extend an AAAB pattern with two shapes?

Today's Challenge
Student page 41 Have children complete the activity on the student page.
Materials
Student page 42
Math Maze cards (Week 9 Activity 42)
Red and yellow crayons or markers
Classroom objects to demonstrate length, volume and capacity

Concept
Compare length, volume, and capacity of objects.

Get Started
Review the vocabulary terms at the right with children. Use objects in the room or draw pictures on the board. For example:

Show or draw three crayons, two of them being the same length.

- blue
- red
- green

Say: “The red crayon is the same length as the blue crayon.”

“The red (or blue) crayon is longer than the green crayon.”

“The green crayon is shorter than the red (or blue) crayon.”

Show or draw three bears or some animal or object having girth to review the vocabulary terms bigger, smaller, and same size. Show or draw three cups or bottles to review the vocabulary terms has more, has less, and has the same amount.

Be sure children understand that the words longer and shorter deal with length, bigger and smaller deal with size, and has more and has less deal with an amount held by a container.

Today’s Challenge
Distribute the 18 Math Maze cards for Week 9. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child’s card. Tell children to pay attention to the particular object being compared. For example, when the question “Who has a shorter pencil?” is asked, children should focus on answer cards having a pencil on them. Since all answers are pictures, children may describe the picture or draw it on the board.

The correct sequence of questions and answers is shown on page 189.

Student page 42 When the group has finished playing the game, have children open their books and complete the Today’s Challenge activity on page 42 in the student book.

Answers for student page 42: 1. Color the first ball yellow. 2. Color the second bean yellow. 3. Color the first hippo red. 4. Color the first cup red.

Go Further
Student page 42 Have children complete this section on the student page.


Assessment
Student self-assessment page 42 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children understand the vocabulary and concepts for comparing length, volume and capacity of objects?
Game Time

Week 9•Activity 43

Materials
Student page 43

Concept
Explore relative capacity.

Get Started
Remind children that we may use many different items to measure capacity (how much something holds). To compare these nonstandard units of capacity draw the items below and ask children which item would hold the most and which would hold the least.

- bathtub
- juice box
- mixing bowl

Today’s Challenge
Student page 43 Explain that today you will be playing a game called “Who Wants to be the Top Scorer?” Have children loop the object on the student page that they will be using to play the game.

As you ask each of four questions, have children look at their objects and answer the question. If their answer is yes, then they are to make a checkmark. Each yes answer, or checkmark, will score a point. Here are the questions to ask:

1. Does your container hold more than a teaspoon? If yes, make a checkmark.
2. Does your container hold more than a jug of milk? If yes, make a checkmark.
3. Does your container hold less than a kitchen sink? If yes, make a checkmark.
4. Does your container hold more than a bottle of ketchup? If yes, make a checkmark.

Top scorer(s) will have a bucket.

Have children find their total scores by counting their checks. Ask a volunteer to name his or her container and explain the score.

Go Further
Student page 43 Using the chart on the student page, have children compare the two items and ring the item that would hold the most.

Answers for student page 43: 1. can 2. milk jug 3. baby swimming pool 4. gallon container of ice cream

Assessment
Student self-assessment page 43 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children compare nonstandard units of capacity?
Materials
Student page 44
Math Jumble activity poster and 1–9 digit cards

Concept
Recognize numbers that are one more and one less than each other.

Get Started
Begin by brainstorming numbers that are neighbors. Have one child choose a number 2–10. Have another child call out a number that is one more or one less than the first number. Then have another child call out the number that was not called out. For example, the first child calls out 5, the second child calls out 6, and the third child calls out 4. Record the trios of numbers that are called out so that the children may see the numbers. Brainstorm any additional trios that were not called out.

Today's Challenge
Using the 1–9 digit cards construct that 4 by 4 poster shown. Explain that the object of today's Math Jumble is to find as many neighbor trios as possible. Neighbor trios can be any three adjoining numbers (top to bottom or left to right) from the poster. Numbers on the poster can be used more than once. Record the trios the children make.

Possible answers are given: 1, 2, 3; 2, 3, 4; 3, 4, 5; 4, 5, 6; 5, 6, 7; 7, 8, 9.

Student page 44 Have children use the Math Jumble on student page 34 to find neighbor trios.

Answers for student page 44: 1. Possible answers: 1, 2, 3; 2, 3, 4; 3, 4, 5; 4, 5, 6; 5, 6, 7; 7, 8, 9

Go Further
Student page 44 Have children complete the equations in the neighbor houses.

Answers for student page 44: 2. 4 3 5 4 5 6

Assessment
Student self-assessment page 44 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children recognize numbers that are neighbors?
Materials
Student page 45
Blank paper

Concept
Identify ordinal numbers.

Get Started
Write the capital letters A, B, C, D, E, F, G, H, I, and J horizontally on the chalkboard. Introduce the vocabulary of first through tenth. Lead a discussion on the positions of the letters. Point out where to begin counting the positions. Ask questions such as: Which letter is fourth (D)? Seventh (G)?

Student page 45 To introduce the activity, work through the first problem on student page 45. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (giraffe) is wrong because “the giraffe is first, not fourth.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (dog) is correct.

Today’s Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 45 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 45: 1. elephant 2. deer

When all children’ papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 45 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children identify the ordinal numbers?
Materials
Student page 46

Concept
Recognize and extend an ABBB pattern with two shapes.

Get Started
Draw the pattern shown below on the chalkboard. Then ask, “What is the rule for this pattern? (triangle, circle, circle, circle)

\[
\triangle \square \square \square \square \square \square \square \square \square \square \square
\]

ABB BA B B A B B B
a b b b a b b b a b b

Have a volunteer draw the next four shapes for this pattern. (triangle, circle, circle, circle)

Tell children that they can use two different letters to show the same pattern. Then help a volunteer make a pattern using two letters. (ABB or abbb, or any other letters in an ABBB pattern)

Draw the following pattern on the chalkboard and ask, “How could you describe it using letters?” (AAB or aab, or any other pair of letters)

\[
\square \square \triangle \square \square \triangle \square \square \triangle \square \square \triangle
\]

Today's Challenge
Student page 46 Have children complete the activity on the student page.

Answers for student page 46:
1. □ △ △ △
2. ○□ □ □ □
3. △ □ □ □

Go Further
Student page 46 Have children complete the activity on the student page. Tell children that in this activity, they are going to use two different letters to show each pattern. Remind them to look closely at each pattern and then check their letter pattern after they finish each one.

Answers for student page 46: 4. ABABAB, known as an AB pattern 5. ABBABBAB, known as an ABB pattern 6. AAABAAAB, known as an AAAB pattern

Assessment
Student self-assessment page 46 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can students recognize and extend an ABBB pattern with two shapes?
Materials
Student page 47
Math Maze cards (Week 10 Activity 47)

Concept
Identify the days of the weeks and the months of the year.

Get Started
Draw on the board or display the current calendar month. Point to the calendar and have children say the days of the week in order. Have children point to the days of the week as you call them out. Then have them find the day before or the day after the one you call out. Also review that there are 7 days in one week.

7 Days of the Week
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday

Show a complete calendar with 12 months or list the names of the months in order on the board. Talk about events that happen in each month and have children find the month on the yearly calendar. Also have them find the month before or the month after the one you call out. Review that there are 12 months in one year.

12 Months of the Year
January
February
March
April
May
June
July
August
September
October
November
December

Instructions for playing Math Maze
Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child’s card. To help some children, write the list of days and months on the board.

The correct sequence of questions and answers is shown on page 190.

Student page 47 When the group has finished playing the game, have children open their books and complete the Today’s Challenge activity on page 47 in the student book.

Answers for student page 47: 1. Wednesday

Go Further
Student page 47 Have children complete this section on the student page.

Answers for student page 47: 9. Saturday and Sunday 10. June, July, and August

Assessment
Student self-assessment page 47 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children know the days of the week and the months of the year in order?

Today’s Challenge
Distribute the 18 Math Maze cards for Week 10. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.
Materials
Student page 48

Concept
Review attributes of geometric solids.

Get Started
Draw a can and a box on the board. Write their names below them. Remind children that a solid is a geometric figure with three dimensions – length, width, and depth. It is not a flat shape like a circle or a triangle. Explain that a face on a solid is the flat side. If you can find these solids in the room (maybe a tissue box or a glass) show the children what a face is, and how the solids slide, stack, or roll.

box

Ask: What is different between a box and a can?
(A box has six faces, a can has two circular faces, a can will roll, and you can stack and slide boxes and cans.)

Have children look around the room for these two shapes. Ask them to come back to group and have them tell you all of the real-life items that look like these shapes. Write the items and draw the pictures under each shape.

Today's Challenge
Student page 48 Explain that today you will be playing a game called “Who Wants to be the Top Scorer?” Have children loop the solid on the student page that they will be using to play the game.

As you ask each of four questions, have children look at their solids and answer the question. If their answer is yes, then they are to make a checkmark. Each yes answer, or checkmark, will score a point.
Here are the questions to ask:
1. Does your solid have a face like a circle? If yes, make a checkmark.
2. Does your solid have the shape of a shoebox? If yes, make a checkmark.
3. Can you stack your solid? If yes, make a checkmark.
4. Does your solid roll? If yes, make a checkmark.

Top scorer(s) will have a can.

Have children find their total scores by counting their checks. Ask a volunteer to name his or her shape and explain the score.

Go Further
Student page 48 Have children draw a real-life item using the geometric solids.

Answers for student page 48: Drawings will vary.

Assessment
Student self-assessment page 48 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children understand the attributes of a can?
Math Jumble
Week 10•Activity 49

Materials
Student page 49
Math Jumble activity poster and 1–9 digit cards

Concept
Recognize numbers that are less than another.

Get Started
Practice using the term "less than." Ask for a volunteer to name one number that is less than five. (Possible answers are 1, 2, 3, and 4. Some children may also realize that 0 is another answer.) Ask another volunteer to name another number that is less than five. Continue until numbers 1 through 4 have been named. Write each answer on the board, for example, "3 is less than 5." Repeat with similar questions until the children are comfortable with the concept of less than.

Today’s Challenge
Using the 1–9 digit cards, construct the 3 by 3 poster shown. Explain that the object of today’s Math Jumble is to find pairs of numbers that can be compared and stated as a "less than" statement. Pairs of numbers are made by adjoining numbers (top to bottom or left to right) on the poster. For example, the 1 and 7 in the first column would be stated as “1 is less than 7.” Record the comparisons children make.

Possible comparisons: 1 is less than 4,
7 is less than 9, 3 is less than 5, 1 is less than 7,
7 is less than 8, 4 is less than 9, 2 is less than 6

Student page 49 Have children use the Math Jumble on student page 49 to find pairs of adjoining numbers that can be compared and stated as a "less than" statement. Have them write the pairs of numbers.

Answers for student page 49: 1. Possible answers: 1 is less than 4, 1 is less than 7, 2 is less than 4,
2 is less than 6, 3 is less than 5, 3 is less than 8,
3 is less than 9, 4 is less than 9, 5 is less than 6,
6 is less than 9, 7 is less than 8, 7 is less than 9.

Go Further
Student page 49 Using the grid on the student page, have each child create a Math Jumble to share with a friend.

Answers for student page 49: 2. Answers will vary. Check children’s work.

Assessment
Student self-assessment page 49 2. Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children recognize numbers that are less than another?
Materials
Student page 50
Blank paper

Concept
Identify a number sentence that does not equal a given sum.

Get Started
Write the chart on the right on the chalkboard. Ask the children to solve the number sentences one by one and find the number sentence that does not equal 5. Work through the equations with the children. Draw picture representations or display concrete objects as a mean to finding the solutions to the problems.

Student page 50 To introduce the activity, work through the first problem on student page 50. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers.

Explain to the children that for today’s first questions they will be choosing the answer that does not equal five. Therefore, in order to rule out an answer, the first step is to look for one that does equal five.

Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (3 + 2 = 2) is wrong because “3 + 2 does equal 5.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (3 + 3 = 6) is correct.

Today’s Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 50 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 50: 1. 2 + 1 + 1 = 2 2. 3 + 2 = 5

When all children’ papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 50 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children identify number sentences that do not meet particular criteria?
Materials
Student page 51

Concept
Recognize and extend patterns with two shapes.

Get Started
Draw the three patterns shown below on the chalkboard. For each pattern, ask children the following questions:

- What is the rule for this pattern? (Answers will vary, depending on the pattern.)
- Who can draw the next four shapes for this pattern? (Check to see that children draw the correct four shapes to complete the pattern.)

Finally, ask volunteers to show each pattern using two other shapes, sizes, colors, or letters. (AB, ABB, and AAAB patterns)

Answers for student page 51: 1. △ □ △ □
2. □ ○ ○ ○ ○
3. ○ ○ △ △

Today's Challenge
Student page 51 Have children complete the activity on the student page.

Answers for student page 51:
1. △ □ △ □
2. □ ○ ○ ○ ○
3. ○ ○ △ △

Go Further
Student page 51 Have children complete the activity on the student page. Remind children to look closely at the given pattern before beginning their patterns.

Answers for student page 51: 4. Answers will vary. Possible answers:
- ○ △ △ ○ △ ○ △ △ ;
- ○ ○ ○ ○ □ □ □ ;
- or ABBABBABB

5. Answers will vary. Possible answers:
- ❥ ★ ❥ ★ ❥ ★ ❥ ★ ❥ ★ ;
- or ABBBABBB

Assessment
Student self-assessment page 51 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can students recognize and extend a pattern with two shapes?
Materials
Student page 52
Math Maze cards (Week 11 Activity 52)
One crayon or marker

Concept
Find 1 more or 1 fewer than a given number of objects.

Get Started
Review the concepts same, more, and fewer with children. Draw a group of 3 small circles in a row. Then draw 3 stars in a row under the row of circles. Draw a line from a circle to a star to show that the 3 circles match the 3 stars in a one-to-one correspondence.

○ ○ ○
☆ ☆ ☆

There is the same number of circles and stars.

Review the concepts of 1 more and 1 fewer. Draw a group of 3 small circles in a row. Then draw 4 stars in a row under the row of circles. Draw a line from a circle to a star to show that the 3 circles match 3 stars with 1 star left over.

○ ○ ☆
☆ ☆ ☆ ☆

There is 1 more star than circles. There is 1 fewer circles than stars.

Today’s Challenge
Distribute the 18 Math Maze cards for Week 11. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze
Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child’s card. Tell children to pay attention to the particular symbol on each card, dots or stars. An answer of ○ ○ ○ ○ ○ (5 dots) is not the answer for the question “Who has 1 more than ☆☆☆☆?” The answer must be ☆☆☆☆☆ (5 stars). Since all the answers are pictures, children may describe the picture or draw it on the board.

The correct sequence of questions and answers is shown on page 191.

Student page 52
When the group has finished playing the game, have children open their books and complete the Today’s Challenge activity on page 52 in the student book.


Go Further
Student page 52
Have children complete this section on the student page.


Assessment
Student self-assessment page 52
Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children find 1 more or 1 fewer than a given number of objects?
Game Time

Materials
Student page 53

Concept
Review attributes of geometric solids.

Get Started
Draw a ball and a box on the board. Write their names below them. Remind children that a solid is a geometric figure with three dimensions – length, width, and depth. It is not a flat shape like a circle or a triangle. Explain that a face on a geometric solid is the flat side. If you can find these geometric solids in the room (maybe a tissue box and a playground ball) show the children what a face is, and how the solids slide, stack, or roll.

![box](image)

![ball](image)

Ask: What is different between a box and a ball?
(A box has six faces, a ball can roll, you can stack a box but not a ball.)

Have children look around the room for these two shapes. Ask them to come back to group and have them tell you all of the real-life items that look like these shapes. Write the items and draw the pictures under each shape.

Today’s Challenge
Student page 53 Explain that today you will be playing a game called “Who Wants to be the Top Scorer?” Have children loop the solid on the student page that they will be using to play the game.

As you ask each of five questions, have children look at their solids and answer the question. If their answer is yes, then they are to make a checkmark. Each yes answer, or checkmark, will score a point. Here are the questions to ask:

1. Does your solid have a face like a rectangle? If yes, make a checkmark.
2. Does your solid have the shape of a ball? If yes, make a checkmark.
3. Can you stack your solid? If yes, make a checkmark.
4. Does your solid roll? If yes, make a checkmark.
5. Does your solid have the shape of a juice box? If yes, make a checkmark.

Top scorer(s) will have a box.

Have children find their total scores by counting their checks. Ask a volunteer to name his or her shape and explain the score.

Go Further
Student page 53 Have children draw a real-life item using the geometric solid.

Answers for student page 53: Drawings will vary.

Assessment
Student self-assessment page 53 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children understand the attributes of a box?
Materials
Student page 54
Math Jumble activity poster and 0–4 digit cards

Concept
Use mental math for addition facts with sums of 2, 3, and 4.

Get Started
Begin by brainstorming ways to make sums of 2, 3 and 4. Record the facts given by the children.

Today’s Challenge
Using the 0–4 digit cards, construct the 4 by 3 poster shown. Explain that the object of today’s Math Jumble is to make as many addition facts as possible with sums of 2, 3, or 4. Fact equations can be made by adding any adjoining numbers (top to bottom or left to right) from the poster. Numbers on the poster can be used more than once but the sum must be 2, 3, or 4. Children may also identify three addends that have a sum of 4. Record a few of the facts the children make.

Possible answers:

<table>
<thead>
<tr>
<th>Sum of 2</th>
<th>Sum of 3</th>
<th>Sum of 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 + 2 = 2</td>
<td>3 + 0 = 3</td>
<td>0 + 4 = 4</td>
</tr>
<tr>
<td>1 + 1 = 2</td>
<td>1 + 2 = 3</td>
<td>3 + 1 = 4</td>
</tr>
<tr>
<td></td>
<td>2 + 2 = 4</td>
<td>2 + 1 + 1 = 4</td>
</tr>
</tbody>
</table>

Student page 54 Have children use the Math Jumble on student page 54 to find more facts with sums of 2, 3, and 4.

Answers for student page 54:
1.  
   Sum of 3
   3 + 0 = 3
   1 + 2 = 3

2.  
   Sum of 4
   0 + 4 = 4
   3 + 1 = 4
   2 + 2 = 4

Go Further
Student page 54 Using an equation from Today’s Challenge, have the children write a story problem and draw a picture for the story.

Answers for student page 54: 3. Check children’s work. Look for a picture that shows a total of 2, 3, or 4.

Assessment
Student self-assessment page 54 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children recognize sums of 2, 3 and 4?
Rule Out Two

Week 11 • Activity 55

Materials
Student page 55
Classroom objects (such as paper clips, chalk, books, and crayons)
Blank paper

Concept
Read a scale.

Get Started
Select four different objects with markedly different weights, for example, a paper clip, a piece of chalk, a large book, a box of crayons. Allow the children to handle the objects. Lead a discussion on which object weighs the most and the least.

Draw a scale on the board, with numbers and marks. Using a pencil as a needle, have the children practice reading the scale. Have the pencil point to the 4 and ask, how much weight does the scale show? (4 pounds.) Have the pencil point between the 2 and the 3 and ask, does the scale show more or less than four pounds? (less) More or less than three pounds? (less) More or less than 2 pounds? (more)

Student page 55 To introduce the activity, work through the first problem on student page 55. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (6 pounds) is wrong because “there is no six on the scale.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (1 pound) is correct.

Today’s Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Then explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 55 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 55: 1. 2 pounds
2. 5 pounds

When all children’s papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 55 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children read a scale?
Materials
Student page 56

Concept
Recognize and extend an ABC pattern.

Get Started
Draw the pattern shown below on the chalkboard.

Then ask children the following questions:
• How many different shapes are in this pattern? What are they? (3; square, circle, triangle)
• What is the rule for this pattern? (square, circle, triangle)

Ask a volunteer to draw the next three shapes in this pattern. (square, circle, triangle)
• What is the next shape after that one? (square)

Remind children that they can draw the same type of pattern using other shapes, sizes, or letters. Help a volunteer to draw a new pattern.

Tell children that it is possible to draw the same type of pattern using numbers. Help a volunteer to draw a new pattern. (possible responses: 1, 2, 3, 1, 2, 3, 1, 2, 3 or 1, 0, 4, 1, 0, 4, 1, 0, 4)

Today's Challenge
Student page 56 Have children complete the activity on the student page.

Answers for student page 56:
1. □ □ △ □
2. □ □ □ □ □
3. △ □ □ □

Go Further
Student page 56 Have children complete the activity on the student page. Tell children that in this activity, they will need to look at how many circles or squares are in each part of the patterns, and they must repeat the numbers in order, just as the pattern repeats the numbers of shapes.

Answers for student page 56: 4, 1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3, 5, 2, 3, 1, 2, 3, 1, 2, 3, 1

Assessment
Student self-assessment page 56 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can students recognize and extend an ABC pattern?
Materials
Student page 57
Math Maze cards (Week 12 Activity 57)

Concept
Tell time to the hour.

Get Started
Review telling time with children. Draw a large clock face on the board. Have the children say the numbers 1 through 12 around the clock face. Recall that the short hand is the hour hand; the long hand is the minute hand. The minute hand points to the 12 and the short hand points to the number that tells the hour.

![Clock Face](image)

8:00

Ask children to tell time for several hour times, including 6:00 and 12:00.

Today's Challenge
Distribute the 18 Math Maze cards for Week 12. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze: Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child’s card. Some answers are pictures. In that case, children can describe the picture or draw it on the board.

Note: When the question asks for the time, the answer card will show the time represented digital-ly. When the question asks for the clock, the answer card will show the time on a clock face.

The correct sequence of questions and answers is shown on page 192.

Student page 57: When the group has finished playing the game, have children open their books and complete the Today's Challenge activity on page 57 in the student book.

Answers for student page 57:
1. ![Clock 1](image)
2. ![Clock 2](image)
3. ![Clock 3](image)
4. ![Clock 4](image)
5. ![Clock 5](image)

Go Further
Student page 57 Have children complete this section on the student page.

Answers for student page 57:
6. ![Clock 6](image)
7. ![Clock 7](image)

Assessment
Student self-assessment page 57: Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip: Can children tell time to the hour?
Materials
Student page 58

Concept
Review attributes of geometric solids.

Get Started
Draw a can and a cube on the board. Write their names below them. Remind children that a block is a geometric figure with three dimensions – length, width, and depth. It is not a flat shape like a circle or a triangle. Explain that a face on a block is the flat side. If you can find these geometric blocks in the room (maybe a die and glass) show the children what a face is, and how the blocks slide, stack, or roll.

As you ask each of four questions, have children look at their blocks and answer the question. If their answer is yes, then they are to make a checkmark. Each yes answer, or checkmark, will score a point. Here are the questions to ask:

1. Does your block have a face like a square? If yes, make a checkmark.
2. Does your block have the shape of a can? If yes, make a checkmark.
3. Can you stack your block? If yes, make a checkmark.
4. Does your block have six faces? If yes, make a checkmark.

Top scorer(s) will have a cube.

Have children find their total scores by counting their checks. Ask a volunteer to name his or her shape and explain the score.

Go Further
Student page 58 Have children draw a real-life item using the blocks.

Answers for student page 58: Drawings will vary.

Assessment
Student self-assessment page 58 Have children circle one of the three choices to describe how they feel about this activity.

Assessment Tip Do children understand the attributes of a cube?

Today’s Challenge
Student page 58 Explain that today you will be playing a game called “Who Wants to be the Top Scorer?” Have children loop the block on the student page that they will be using to play the game.
Materials
Student page 59
Math Jumble activity poster and 0–6 domino cards

Concept
Recognize combinations for 5 and 6.

Get Started
Begin by brainstorming facts for 5. Record the facts the children make. Any number of addends may be used; for example, $1 + 2 + 2 = 5$. Then brainstorm facts for 6 and again record the facts made by the children.

Today's Challenge
Using the 0–6 domino cards, construct the 4 by 3 poster shown. Explain that the object of today’s Math Jumble is to make as many addition facts as possible with sums of 5 and 6. Addends can be made by adding adjoining numbers (top to bottom or left to right) on the poster. Record a few of the facts children make.

Possible answers:

<table>
<thead>
<tr>
<th>Sum of 5</th>
<th>Sum of 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0 + 5 = 5$</td>
<td>$0 + 6 = 6$</td>
</tr>
<tr>
<td>$1 + 4 = 5$</td>
<td>$1 + 5 = 6$</td>
</tr>
<tr>
<td>$2 + 3 = 5$</td>
<td>$4 + 2 = 6$</td>
</tr>
<tr>
<td>$3 + 0 = 5$</td>
<td>$3 + 3 = 6$</td>
</tr>
</tbody>
</table>

Student page 59 Have children use the Math Jumble on student page 59 to find pairs of dominoes with sums of 5 and 6. Dominos can be used more than once. For example, the 1 and the 4 in the first column can be added together to make the sum of 5. The 1 and 5 in the first row can be added together to make the sum of 6.

Possible answers for student page 59:
1. 
<table>
<thead>
<tr>
<th>Sum of 5</th>
<th>Sum of 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0 + 5 = 5$</td>
<td>$0 + 6 = 6$</td>
</tr>
<tr>
<td>$1 + 4 = 5$</td>
<td>$1 + 5 = 6$</td>
</tr>
<tr>
<td>$2 + 3 = 5$</td>
<td>$4 + 2 = 6$</td>
</tr>
<tr>
<td>$5 + 0 = 5$</td>
<td>$3 + 3 = 6$</td>
</tr>
</tbody>
</table>

Go Further
Student page 59 Have the children complete the pictures to make 5 and 6 and write equations to match the pictures.

Answers for student page 59: 3. draw 2 flowers; 4. draw 4 pieces of pizza, $2 + 4 = 6$

Assessment
Student self-assessment page 59 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children recognize sums for 5 and 6?
Rule Out Two

Week 12 • Activity 60

Materials
Student page 60
Blank paper

Concept
Identify two-dimensional shapes.

Get Started
Draw and label a circle, a square, a rectangle, and a triangle on the chalkboard. Discuss each shape and its distinguishing attributes before proceeding with student page.

- A circle is round and has no corners.
- A triangle has three straight sides and three corners.
- A square has four straight sides that are all exactly the same length. A square also has four corners that are all the same, and you can fit the corner of a piece of paper into any corner of a square.
- A rectangle has four corners just like a square, but a rectangle might have two longer sides and two shorter sides.

Student page 60 To introduce the activity, work through the first problem on student page 60. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (circle) is wrong because “a circle has no corners.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (rectangle) is correct.

Today’s Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 60 and the maximum number of points for the day is 60.

Student page 60 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 60: 1. triangle 2. square

When all children’ papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 60 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children identify a circle, a square, a rectangle, and a triangle?
Materials  
Student page 61

Concept  
Recognize and extend an AABC pattern.

Get Started  
Draw the pattern shown below on the chalkboard.

= = △ □ □

Then ask children the following questions:
• How many different shapes are in this pattern? (3) 
  What are they? (square, triangle, rectangle)
• What is the rule for this pattern? (square, square, 
  triangle, rectangle)
• What are the next four shapes in this pattern? 
  (square, square, triangle, rectangle)

Ask a volunteer to draw a string of beads to show 
the same pattern. (Use three shapes in AABC pat-
tern.)

= = = △ △ △ △ △ △ △ △

(Possible pattern: circle, circle, square, triangle)

Today's Challenge  
Student page 61 Have children complete the activi-
ty on the student page.

Answers for student page 61:
1. = = △ □
2. ★ ★ □ □
3. □ □ □ □

Go Further  
Student page 61 Have children complete the activi-
ty on the student page. Remind children that they 
will be using the AABC pattern in finding the miss-
ing beads, and to do so, they must look carefully at 
the first AABC repeat.

Answers for student page 61:
4. (Possible pattern: circle, circle, square, triangle)
5. (Possible pattern: circle, circle, square, triangle)

Assessment  
Student self-assessment page 61 Have children cir-
cle one of the three choices to describe how they 
feel about this activity.

Assessment tip Can students recognize and extend 
an AABC pattern?
Materials
Student page 62
Math Maze cards (Week 13 Activity 62)
Blue, red, and yellow crayons or markers.

Concept
Use algebraic thinking to practice sums through 5.

Get Started
Draw two objects on the board and then draw one
more object on the board. Ask the children to find
the total number of objects by counting.

```
   __  __
  ^ ^ ^
```

Count: 1, 2, ..., 3 objects.

Write the addition problem \( 2 + 1 = \_ \) on the
board for the objects that were drawn above, and
ask the children to find the sum. (3) Have them
count the objects in each group and then put them
together to find the sum.

```
   __  __
  ^ ^ ^
```

Add: \( 2 + 1 = \_ \)

Write the problem \( 3 + 0 = \_ \) on the board. Ask
children what happens when zero is added to a
number. (The sum of a number and 0 is that num-
ber. For example, \( 3 + 0 = 3 \).

Challenge children by writing an addition problem
with three addends, such as \( 1 + 2 + 1 = \_ \), on
the board. Permit them to draw pictures or use
models to find the sum. (4)

Today's Challenge
Distribute the 18 Math Maze cards for Week 13.
Each student should receive at least one card, but
since all cards need to be distributed, some students
may need to get more than one card. Use the cards
to play the Math Maze game.

Instructions for playing Math Maze Ask students to
look at their cards. Ask one student to read the
question that is written on his or her card. Next ask,
"Who has the card with the answer to the question
just read?" Ask that student to read the answer, and
then read the question on his or her card. Play con-
tinues until all questions have been answered. The
last answer to be read should be the answer on the
first student's card.

Allow students to write the addition sentence ques-
tions on the board instead of reading them.

Note: Same answer boxes mean same number.
For example, \( \bigcirc + \bigcirc = 4 \) means \( 2 + 2 = 4 \),
but \( \bigcirc + \bigbox = 4 \) means \( 1 + 3 = 4 \). Also, a \( \bigcirc \) does
not always represent the number 2; a \( \bigbox \) could rep-
resent the number 3 in the addition sentence
\( \bigcirc + 1 = 4 \).

The correct sequence of questions and answers is
shown on page 193.

Student page 62 When the group has finished play-
ing the game, have students open their books and
complete the Today's Challenge activity on page 62
in the student book.

Answers for student page 62: 1. Blue: \( 1 + 2, 3 + 0, 1 + 1 + 1; \) Red: \( 3 + 1, 2 + 2, 4 + 0; \) Yellow:
\( 2 + 3, 1 + 4, 2 + 1 + 2 \) (Picture of a yellow house
with a red door, red roof and blue background.)

Go Further
Student page 62 Have students complete this sec-
tion on the student page.

Answers for student page 62: 2. Addends may be
in any order: \( 2 + 3 = 5 \) or \( 3 + 2 = 5; \) \( 4 + 1 = 5 \) or
\( 1 + 4 = 5; \) \( 5 + 0 = 5 \)

Assessment
Student self-assessment page 69 Have students cir-
cle one of the three choices to describe how they
feel about this activity.

Assessment tip Can students find sums through 5
with two or three addends?
Materials
Student page 63

Concept
Review attributes of geometric solids.

Get Started
Draw a ball and a cube on the board. Write their names below them. Remind children that a block is a geometric figure with three dimensions - length, width, and depth. It is not a flat shape like a circle or a triangle. Explain that a face on a block is the flat side. If you can find these blocks in the room (maybe a die and a playground ball) show the children what a face is, and how the blocks slide, stack, or roll.

As you ask each of five questions, have children look at their blocks and answer the question. If their answer is yes, then they are to make a checkmark. Each yes answer, or checkmark, will score a point. Here are the questions to ask:
1. Does your block have a face like a square? If yes, make a checkmark.
2. Does your block have the shape of a ball? If yes, make a checkmark.
3. Can you stack your block? If yes, make a checkmark.
4. Does your block roll? If yes, make a checkmark.
5. Does it fall when you try to stack your block? If yes, make a checkmark.

Top scorer(s) will have a ball.

Have children find their total scores by counting their checks. Ask a volunteer to share his or her shape and explain the score.

Ask: What is different between a cube and a ball?
(A cube has six faces that are square but a ball has no faces, a ball can roll but a cube can not, you can stack a cube but not a ball.)

Have children look around the room for these two shapes. Ask them to come back to group and have them tell you all of the real-life items that look like these shapes. Write the items and draw the pictures under each shape. Children may not distinguish a cube from other box shapes. Point out the differences. A cube is a special kind of box; all the faces are squares.

Today's Challenge
Student page 63 Explain that today you will be playing a game called "Who Wants to be the Top Scorer?" Have children loop the block on the student page that they will be using to play the game.

Go Further
Student page 63 Have children draw a real-life item using the block.

Answers for student page 63: Drawings will vary.

Assessment
Student self-assessment page 63 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children understand the attributes of a ball?
Materials
Student page 64
Math Jumble activity poster and penny and nickel coin cards
Markers or crayons

Concepts
Recognize the value of the penny and the nickel.
Count mixed change.

Get Started
Begin by reviewing how to count coin combinations up to six cents. Ask, "How much is five pennies worth?" (5 cents) "How much is one nickel worth?" (5 cents) "How much is one nickel and one penny worth?" (6 cents) Continue with similar examples until the children are comfortable with adding pennies and a nickel.

Today's Challenge
Using the penny and nickel coin cards, construct the 3 by 3 poster shown. Explain that the object of today's Math Jumble is to find combinations for 5 cents and 6 cents. Combinations can be made by adding any adjoining numbers (top to bottom or left to right) from the poster. Record a few of the amounts the children make.

Possible Answers:
<table>
<thead>
<tr>
<th>Sum of 5¢</th>
<th>Sum of 6¢</th>
</tr>
</thead>
<tbody>
<tr>
<td>1N</td>
<td>1P + 1N = 6</td>
</tr>
<tr>
<td>2P + 3P = 5</td>
<td>4P + 2P = 6</td>
</tr>
<tr>
<td>1P + 4P = 5</td>
<td>1N + 1P = 6</td>
</tr>
<tr>
<td></td>
<td>1 P + 2 P + 3P</td>
</tr>
</tbody>
</table>

Student page 64 Have the children look for adjoining coins (left to right, top to bottom) in the grid on student page 54 to find sums of 5 cents and 6 cents.

Possible answers for student page 64:
1. 2.

<table>
<thead>
<tr>
<th>Sum of 5¢</th>
<th>Sum of 6¢</th>
</tr>
</thead>
<tbody>
<tr>
<td>2¢ + 3¢ = 5¢</td>
<td>1¢ + 5¢ = 6¢</td>
</tr>
<tr>
<td>1¢ + 4¢ = 5¢</td>
<td>4¢ + 2¢ = 6¢</td>
</tr>
<tr>
<td></td>
<td>1¢ + 2¢ + 3¢ = 6¢</td>
</tr>
</tbody>
</table>

Go Further
Student page 64 Have the students loop the amounts asked for in the book.

Answers for student page 64: 3. nickel and penny, or 6 pennies looped in green 4. nickel and 2 pennies, or seven pennies looped in blue 5. 2 nickels, 1 nickel and 5 pennies, or 10 pennies looped in red

Assessment
Student self-assessment page 64 Have students circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children count mixed change?
Rule Out Two

Week 13 • Activity 65

Materials
Student page 65
Blank paper

Concept
Identify 6, 7, 8, and 9 in the context of a ten-frame.

Get Started
Draw a ten frame on the chalkboard. Draw five shaded circles in the ten-frame as shown.

Demonstrate counting the shaded circles and writing the numeral that describes the quantity. Point out that ten frames are filled one row at a time. That makes it easy to see if you have more or less than five. Draw six shaded circles. Since you know there are five in the top row, you can count on from five, then see quickly that there are six. Repeat using seven, eight, or nine shaded circles, as well as five and six again, until the children are at ease using the ten-frame as a counting tool.

Student page 65 To introduce the activity, work through the first problem on student page 65. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say “5” is wrong because “there are more than 5 circles in the ten-frame.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (8) is correct.

Today’s Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 65 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 65: 1, 6, 2, 9

When all children’s papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 65 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children identify the quantities of 6, 7, 8, and 9 when represented in a ten-frame?
Pattern Puzzler

Materials
Student page 66
Red, yellow, and blue crayons or markers

Concept
Recognize and extend an ABCC pattern.

Get Started
Draw the pattern shown below on the board. Then ask children the following questions:

- How many different shapes are in this pattern? (3)
  What are they? (rectangle, triangle, circle)
- What is the rule for this pattern? (rectangle, triangle, circle, circle)
- What are the next four shapes for this pattern? (rectangle, triangle, circle, circle)

Ask a volunteer to use three colors to show an ABCC pattern.

Answers for student page 66:
1. □ □ ○ ○
2. ○ ☆ □ □
3. ○ ○ △ △

Go Further
Student page 66 Have children complete the activity on the student page. Tell children that they are to use a red, a blue, and a yellow crayon to extend the ABCC pattern in the necklace.

Answers for student page 66: 4. Check to see that children use the colors red, blue, yellow, and yellow again to show and extend the ABCC pattern.

Assessment
Student self-assessment page 66 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can students recognize and extend an ABCC pattern?
Materials
Student page 67
Math Maze cards (Week 14 Activity 67)

Concept
Count to 30.

Get Started
Write the numbers 1 through 30 on the board as shown below, one row at a time:

1 2 3 4 5 6 7 8 9 10
11 12 13 14 15 16 17 18 19 20
21 22 23 24 25 26 27 28 29 30

Review with children counting from 1 through 10, then 11 through 20, and finally 21 through 30 as you write each row of numbers. Ask children if they notice a pattern to the counting process.

Write the following problems on the board. Have the children say the numbers and then write the number that comes next.

7, 8, 9, __
14, 15, 16, __
18, 19, 20, __
27, 28, 29, __

Today’s Challenge
Distribute the 18 Math Maze cards for Week 14. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child’s card.

The correct sequence of questions and answers is shown on page 193.

Student page 67 When the group has finished playing the game, have children open their books and complete the Today’s Challenge activity on page 67 in the student book.

Answers for student page 67: 1, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 3, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 4, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 5, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 26, 28, 29, 30

Go Further
Student page 67 Have children complete this section on the student page.

Answers for student page 67: 7. Children count and write the numbers 1 through 30 on the beads.

Assessment
Student self-assessment page 67 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tips Can children count from 1 through 30? Can children write the numerals for 1 through 30?
Materials
Student page 68
Blank paper

Concept
Review teen numbers.

Get Started
Write numbers eleven through nineteen on the board. Have children count along as you write the numbers.

11 12 13 14 15 16 17 18 19

Student page 68 Have children use the information on the board to answer the questions in the Get Started section of page 68 in their books.

Answers for student page 68: 1. yes, yes, no
2. yes, yes, no

Today’s Challenge
Explain that today you will be playing a game called “Who Wants to be the Top Scorer?” Have each child take a blank sheet of paper and write a number between eleven and nineteen on top of the paper. Then ask children to number their papers from 1 to 5.

As you ask each of five questions, have children look at their number and answer the question. Yes answers will score tally points. Here are the questions to ask:

1. Is your number more than one ten and seven ones? If yes, score one tally point.
2. Is your number less than 15? If yes, score one tally point.
3. Does your number have a 2 or a 4 in it? If yes, score two tally points.
4. Does your number come before 18? If yes, score 2 tally points.
5. Is your number one more than 14? If yes, score 3 tally points.

Have children find their total scores. Determine which child has the highest score. Have that child write his or her number on the board and explain the points.

Go Further
Student page 68 Have children solve the riddle and create another riddle for a friend to solve. Have the solver sign his or her name.

Answers for student page 68: 3. 13 4. Answers will vary.

Assessment
Student self-assessment page 68 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children recognize teen numbers?
Materials
Student page 69
Math Jumble activity poster and 0–6 digit cards

Concept
Recognize combinations for 5 and 6.

Get Started
Begin by reviewing facts for 5. Record the facts the children make. Any number of addends may be used. For example, you can say $1 + 2 + 2 = 5$. Then brainstorm facts for 6 and again record the facts made by the children.

Today's Challenge
Using the 0–6 digit cards, construct the 4 by 3 poster shown. Explain that the object of today's Math Jumble is to make as many addition facts as possible with sums of 5 and 6. The numbers should be adjoining (top to bottom, left to right). Record a few of the facts children make. Children may suggest more than 2 addends. Possible answers are given.

Possible answers:

<table>
<thead>
<tr>
<th>Sum of 5</th>
<th>Sum of 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0 + 5 = 5$</td>
<td>$6 + 0 = 6$</td>
</tr>
<tr>
<td>$1 + 4 = 5$</td>
<td>$2 + 4 = 6$</td>
</tr>
<tr>
<td>$2 + 3 = 5$</td>
<td>$3 + 3 = 6$</td>
</tr>
<tr>
<td>$2 + 1 + 2 = 5$</td>
<td>$1 + 2 + 3 = 6$</td>
</tr>
</tbody>
</table>

Go Further
Student page 69 Have the children draw faces and complete the equations for sums of 5 and 6.

Answers for student page 69:
3. $4 + 1 = 5$
4. $4 + 2 = 6$

Assessment
Student self-assessment page 69 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children recognize sums of 5 and 6?
Materials
Student page 70
Paper clips
Blank paper

Concept
Identify problem situations that require addition.

Get Started
Display two small piles of five to ten paper clips.
Write the following question on the board: How many paper clips are there in all? Discuss the question. Emphasize the idea of putting groups together as the process of addition.

Move the two piles together and count to find the answer. Ask for a volunteer to give another example of when adding can give you the answer to a question. Have the group tell whether adding could give the answer to questions such as the following: How tall am I? (no) How many legs are on 3 chairs? (yes) How many fingers are on two hands? (yes) Which shelf has the most books? (no) How many children are absent? (no) How many markers do the two children have altogether? (yes)

Student page 70 To introduce the activity, work through the first problem on student page 70. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (What time did the bus pick you up today?) is wrong because “you are reading the time not adding the time.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (How many days are in two weeks?) is correct.

Today’s Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Then explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 70 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 70: 1. How many eggs did the two hens lay? 2. What is 5 more than 8?

When all children’s papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 70 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children identify story problems that require addition?
Materials
Student page 71
Pennies and nickels

Concept
Recognize and extend a linear pattern using coins.

Get Started
Review with children the name of each coin. Be sure they can identify a nickel and a penny by its head and its tail.

Penny
Nickel

Draw the pattern of coins below on the chalkboard. You may use coins or P and N, if children understand that the letters stand for penny and nickel. Then ask the following questions:

- How many different coins are used in this pattern?
- (2) What are they? (penny and nickel)
- Which ones are the pennies (nickels)? Point to them.
- What is the rule for this pattern? (penny, nickel; AB)

Have a volunteer show (draw) three coins that come next. (penny, nickel, penny)

Today's Challenge
Student page 71 Have children complete the activity on the student page. Remind children that they must look carefully at the pattern shown before deciding what three coins come next.

Answers for student page 71:
1. 
   
2. 
   
3. 
   
4. 

Go Further
Student page 71 Have children complete the activity on the student page.

Answers for student page 71: 5. Check to see that the children have a pattern that repeats at least twice. You might suggest coloring the pennies brown so that it is easier to see the pattern. Allow children to use coins to cover the circles, if needed.

Assessment
Student self-assessment page 71 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can students recognize and extend a pattern using coins?
Materials
Student page 72
Math Maze cards (Week 15 Activity 72)

Concept
Use algebraic thinking to practice sums through 7.

Get Started
Review sums of 6 and 7 with children. Write the problems below on the board. Have the children say and write the sums.

<table>
<thead>
<tr>
<th>Sums of 6</th>
<th>Sums of 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 + 3 = ___</td>
<td>4 + 3 = ___</td>
</tr>
<tr>
<td>4 + 2 = ___</td>
<td>5 + 2 = ___</td>
</tr>
<tr>
<td>5 + 1 = ___</td>
<td>6 + 1 = ___</td>
</tr>
<tr>
<td>6 + 0 = ___</td>
<td>7 + 0 = ___</td>
</tr>
</tbody>
</table>

Use the same set of problems again. This time, erase one or both of the addends so that children can write in the missing numbers.

Children may draw pictures to find the sums or check their answers.

Today’s Challenge
Distribute the 18 Math Maze cards for Week 15. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered.

The last answer to be read should be the answer on the first child’s card.

Allow children to write the addition sentence questions on the board instead of reading them.

Note: Same answer boxes mean the same number. For example, ◆ + ◆ = 4 means 2 + 2 = 4, but ▲ + ▼ = 4 means 1 + 3 = 4. Also, a ◆ does not always represent the number 2; a ◆ could represent the number 3 in the addition sentence ◆ + 1 = 4.

The correct sequence of questions and answers is shown on page 194.

Student page 72 When the group has finished playing the game, have children open their books and complete the Today’s Challenge activity on page 72 in the student book. Tell children that each number will match several number sentences.

Answers for student page 72: 1. Sum of 4: 3 + 1, 4 + 0, 2 + 2. Sum of 5: 2 + 3, 5 + 0, 1 + 4. Sum of 6: 3 + 3, 0 + 6, 5 + 1, 4 + 2. Sum of 7: 1 + 6, 3 + 4, 5 + 2, 7 + 0.

Go Further
Student page 72 Have children complete this section on the student page.

Answers for student page 72: Children can show two of the four possible ways for the sum of 7 using the part-part-whole mats. Addends may be in any order: 4 + 3 = 7; 5 + 2 = 7; 6 + 1 = 7; 7 + 0 = 7.

Assessment
Student self-assessment page 72 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children find sums through 7 with two or three addends?
**Game Time**

**Materials**
Student page 73
Blank paper

**Concept**
Review the value of the penny, nickel, and dime.

**Get Started**
Review the value of a penny, nickel and dime. Use real coins or play money coins if available.

<table>
<thead>
<tr>
<th>Coin</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Penny</td>
<td>1 cent</td>
</tr>
<tr>
<td>Nickel</td>
<td>5 cent</td>
</tr>
<tr>
<td>Dime</td>
<td>10 cent</td>
</tr>
</tbody>
</table>

Ask children to make observations about the coins. Encourage them to tell the characteristics of each coin, how they are alike, and how they are different.

**Student page 73** Have children use the information on the board to answer the questions in the Get Started section of page 73 in their books.

**Answers for student page 73:**
1. yes, yes, no
2. a. no, yes, yes

**Today's Challenge**
Explain that today you will be playing a game called "Who Wants to be the Top Scorer?" Have each child take a blank sheet of paper and draw a penny, nickel, or dime on the top. Then ask children to number their papers from 1 to 5.

As you ask each of five questions, have children look at their number and answer the question. Yes answers will score tally points. Here are the questions to ask:

1. Is the value of your coin 10 cents? If yes, score one tally point.
2. Is the value of your coin one cent? If yes, score one tally point.
3. Is the value of your coin 5 cents? If yes, score two tally points.
4. If you had two of your coins in your pocket, would you have 2 cents? If yes, score 2 tally points.
5. Is your coin a copper color? If yes, score 3 tally points.

Top scorer(s) will have a penny.

Have children find their total scores. Determine which child has the highest score. Have that child draw the coin on the board and explain how he or she scored the points.

**Go Further**
**Student page 73** Have children solve the riddle and create another riddle for a friend to solve. Have the solver sign his or her name.

**Answers for student page 73:**
3. penny 4. Answers will vary.

**Assessment**
**Student self-assessment page 73** Have children circle one of the three choices to describe how they feel about this activity.

**Assessment tip** Do children recognize characteristics of a penny?
Materials
Student page 74
Math Jumble activity poster and 0–7 domino cards

Concept
Recognize combinations for 6 and 7.

Get Started
Begin by reviewing facts for 6. Record the facts the children make. Any number of addends may be used. Then brainstorm facts for 7 and again record the facts made by the children.

Today’s Challenge
Using the 0–7 domino cards, construct the 4 by 4 poster shown. Explain that the object of today’s Math Jumble is to make as many addition facts as possible with sums of 6 or 7. The numbers should be adjoining (top to bottom, left to right). Record a few of the facts children make. Children may suggest more than two addends. Possible answers are given.

Possible answers:

<table>
<thead>
<tr>
<th>Sum of 6</th>
<th>Sum of 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 + 6 = 6</td>
<td>7 + 0 = 7</td>
</tr>
<tr>
<td>1 + 5 = 6</td>
<td>6 + 1 = 7</td>
</tr>
<tr>
<td>4 + 2 = 6</td>
<td>5 + 2 = 7</td>
</tr>
<tr>
<td>3 + 3 = 6</td>
<td>4 + 3 = 7</td>
</tr>
<tr>
<td>1 + 3 + 2 = 6</td>
<td>3 + 3 + 1 = 7</td>
</tr>
</tbody>
</table>

Student page 74 Have children use the Math Jumble on student page 74 to find facts with sums of 6 and 7. The numbers should be adjoining (top to bottom, left to right).

Answers for student page 74:

1. 2.

<table>
<thead>
<tr>
<th>Sum of 6</th>
<th>Sum of 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 + 6 = 6</td>
<td>7 + 0 = 7</td>
</tr>
<tr>
<td>1 + 5 = 6</td>
<td>6 + 1 = 7</td>
</tr>
<tr>
<td>4 + 2 = 6</td>
<td>5 + 2 = 7</td>
</tr>
<tr>
<td>3 + 3 = 6</td>
<td>4 + 3 = 7</td>
</tr>
<tr>
<td>1 + 3 + 2 = 6</td>
<td>3 + 3 + 1 = 7</td>
</tr>
<tr>
<td>1 + 1 + 3 + 2 = 7</td>
<td></td>
</tr>
</tbody>
</table>

Go Further
Student page 74 The children complete the pictures to make 6 and 7 and complete equations to match the pictures.

Answers for student page 74:

3. draw 3 stars; 3 + 3 = 6
4. draw 5 squares; 2 + 5 = 7

Assessment
Student self-assessment page 74 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children recognize sums for 6 and 7?
Materials
Student page 75
Blank paper

Concept
Identify coins and their values.

Get Started
Display real or plastic money or draw symbolic representations on the chalkboard. Label each coin and discuss its value. Describe the physical characteristics of each, including the size, color, and texture. Discuss the relationships between coins.

Student page 75 To introduce the activity, work through the first problem on student page 75. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (penny) is wrong because “a penny is worth 1¢.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (quarter) is correct.

Today’s Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 75 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 75: 1. dime 2. 5¢

When all children’s papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 75 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children identify coins and their values?
Pattern Puzzler

Materials
Student page 76
Pennies and nickels

Concept
Recognize the coin pattern of pennies and nickels for amounts from 1¢ to 20¢.

Get Started
Review with children the name and value of each coin. You might have children exchange five pennies for one nickel to show the equivalent values.

1 cent
1¢

5 cents
5¢

Draw a chart on the board such as the one shown at the right, except for the numbers in parentheses. Ask children to help you fill in the chart by asking them these questions:

<table>
<thead>
<tr>
<th>Amount</th>
<th>Pennies</th>
<th>Nickels</th>
</tr>
</thead>
<tbody>
<tr>
<td>1¢</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2¢</td>
<td>(2)</td>
<td>0</td>
</tr>
<tr>
<td>3¢</td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td>4¢</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5¢</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>6¢</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>7¢</td>
<td>(2)</td>
<td>(1)</td>
</tr>
<tr>
<td>8¢</td>
<td>(3)</td>
<td>(1)</td>
</tr>
<tr>
<td>9¢</td>
<td>(4)</td>
<td>(1)</td>
</tr>
<tr>
<td>10¢</td>
<td>(0)</td>
<td>(2)</td>
</tr>
</tbody>
</table>

• If you had pennies and nickels and used the least number of coins, how many of each coin would you need to have:
  5 cents? (1 nickel)
  7 cents? (1 nickel, 2 pennies)
  10 cents? (2 nickels)

• What pattern do you notice about the pennies and nickels as you have more and more money? (The number of pennies repeats when you add a nickel.)

Today's Challenge
Student page 76 Have children complete the activity on the student page.

Answers for student page 76: Missing numbers, beginning with 15¢ and going down the chart: 3, 1, 2, 3, 4, 4, 0.

Go Further
Student page 76 Have children complete the activity on the student page. Allow children to use coins, if needed.

Answers for student page 76: 2. Children may show any three of these four possible answers: 3 nickels; 2 nickels, 5 pennies; 1 nickel, 10 pennies; 15 pennies.

Assessment
Student self-assessment page 76 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children recognize a pattern of pennies and nickels for amounts from 1¢ to 20¢?
Materials
Student page 77
Math Maze cards (Week 16 Activity 77)
Pennies and nickels

Concept
Find the value of a set of pennies and nickels for amounts up to 20¢.

Get Started
Review with children the name and value of each coin. Make sure they can identify a nickel and a penny by its head and tail. You might have some children exchange 1 nickel for 5 pennies to make sure they understand the equivalent values. Point out that the cents sign (¢) is used to indicate an amount of money when used with a number. Incorporate the use of the words coin, money, cent(s), amount, value, and worth when talking about money, and make sure children understand what each term means.

<table>
<thead>
<tr>
<th>1 penny</th>
<th>5 pennies</th>
<th>1 nickel</th>
<th>5 cents</th>
<th>5 cents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1¢</td>
<td>5¢</td>
<td>5¢</td>
<td>5¢</td>
<td></td>
</tr>
</tbody>
</table>

Remember, when counting amounts of money for sets of coins containing nickels and pennies, first count by fives for all the nickels and then count on by ones for all the pennies. If necessary, review counting by fives up to 20.

Today’s Challenge
Distribute the 18 Math Maze cards for Week 16. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child’s card. Some of the answers are pictures. Children can describe the picture or draw it on the board. Those children needing extra help may use pennies and nickels to answer the question.

The correct sequence of questions and answers is shown on page 195.

Student page 77 When the group has finished playing the game, have children open their books and complete the Today’s Challenge activity on page 77 in the student book.

Answers for student page 77:
1. Two pennies
2. Five cents and one nickel
3. Four nickels
4. Three pennies and two nickels
5. One nickel
6. Two nickels

Go Further
Student page 77 Have children complete this section on the student page. Children can draw circles and with the letters “P” and “N,” or the amounts “1¢” and “5¢” on the circles to indicate pennies and nickels. Use coin stamps if they are available.

Answers for student page 77: 7. 2 nickels, 2 pennies 8. 2 nickels, 4 pennies

Assessment
Student self-assessment page 77 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children find the value of sets of pennies and/or nickels for amounts up to 20¢?
Materials
Student page 78

Concept
Count pennies and nickels.

Get Started
Review the value of a penny and nickel.

1 cent 5 cents

Encourage children to skip count by 5, for example 5, 10, 15, 20.

Today's Challenge
Student page 78 Use the chart on page 78 in the student book to play Four-in-a-Row. For each description you read from the list below, there is at least one but sometimes two or more squares that match. Instruct children that they are to make an X on one box for each description. The object of the game is to get four Xs in a row, horizontally, vertically, or diagonally. Read the following instructions.

Mark a box that shows:

2 cents 11 cents
6 cents 7 cents
5 cents 5 cents
4 cents 10 cents
10 cents 8 cents
3 cents 3 cents
6 cents 7 cents
8 cents 11 cents

When a child has four in a row, he or she calls out “I have four in a row!” That child should then describe the squares that were marked. If those squares have all been called, that child is the winner.

Go Further
Have children complete the chart in the Go Further section of page 78 in the student book.


Assessment
Student self-assessment page 78 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Are children able to evaluate combinations of pennies and nickels?
Materials
Student page 79
Math Jumble activity poster and penny and nickel coin cards

Concepts
Recognize combinations for 6 cents and 7 cents
Count mixed change.

Get Started
Begin by reviewing how to count coin combinations up to seven cents. Ask, "How much is five pennies worth?" (5 cents) "How much is one nickel worth?" (5 cents) "How much is one nickel and one penny worth?" (6 cents) Continue with similar examples until the children are comfortable with adding pennies and a nickel.

Today's Challenge
Using the penny and nickel coin cards, construct the 3 by 3 poster shown. Explain that the object of today's Math Jumble is to make as many combinations for 6 and 7 cents as possible using two or more coin cards. Cards should be adjoining on the poster (left to right, top to bottom). Show coin cards for each combination and record the fact.

Possible answers:

<table>
<thead>
<tr>
<th>Sum of 6¢</th>
<th>Sum of 7¢</th>
</tr>
</thead>
<tbody>
<tr>
<td>5¢ + 1¢ = 6¢</td>
<td>5¢ + 2¢ = 7¢</td>
</tr>
<tr>
<td>2¢ + 4¢ = 6¢</td>
<td>4¢ + 3¢ = 7¢</td>
</tr>
<tr>
<td></td>
<td>1¢ + 6¢ = 7¢</td>
</tr>
<tr>
<td></td>
<td>1¢ + 4¢ + 2¢ = 7¢</td>
</tr>
</tbody>
</table>

Student page 79 Have children complete Today's Challenge on student page 94 to find sums of 6 and 7. Combinations should be made by adding two or more adjoining coin cards (top to bottom or left to right). Have children record facts they find.

Possible answers for student page 79:
1. _____________
2. _____________

<table>
<thead>
<tr>
<th>Sum of 6¢</th>
<th>Sum of 7¢</th>
</tr>
</thead>
<tbody>
<tr>
<td>5¢ + 1¢ = 6¢</td>
<td>5¢ + 2¢ = 7¢</td>
</tr>
<tr>
<td>2¢ + 4¢ = 6¢</td>
<td>4¢ + 3¢ = 7¢</td>
</tr>
<tr>
<td></td>
<td>1¢ + 6¢ = 7¢</td>
</tr>
<tr>
<td></td>
<td>1¢ + 4¢ + 2¢ = 7¢</td>
</tr>
</tbody>
</table>

Go Further
Student page 79 Have children total the items in their shopping cart and write the equations.

Answers for student page 79: 3. 5¢ + 2¢ = 7¢
4. 4¢ + 3¢ = 7¢

Assessment
Student self-assessment page 79 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tips Can children count mixed change?
Can children write addition sentences?
**Materials**
Student page 80
Blank paper

**Concept**
Identify two-dimensional shapes.

**Get Started**
Draw and label a circle, a square, a rectangle, and a triangle on the chalkboard. Relate items in the classroom environment to the various shapes. Discuss each shape and its distinguishing attributes before proceeding with student page.

- A circle is round and has no corners.
- A triangle has three straight sides and three corners.
- A square has four straight sides that are all exactly the same length. A square also has four corners that are all the same, and you can fit the corner of a piece of paper into any corner of a square.
- A rectangle has four corners just like a square, but a rectangle might have two longer sides and two shorter sides.

**Student page 80** To introduce the activity, work through the first problem on student page 80. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (square) is wrong because “it is not round like a circle.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (circle) is correct.

**Today’s Challenge**
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

**Student page 80** Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

**Answers for student page 80:** 1. triangle 2. picture frame

When all children’s papers have been scored, determine the high scorer(s) for the day.

**Go Further**
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

**Assessment**

**Student self-assessment page 80** Have children circle one of the three choices to describe how they feel about this activity.

**Assessment tip** Can the children identify a circle, a square, a rectangle, and a triangle?
Materials
Student page 81
Red and blue crayons or markers

Concept
Use two colors to draw a repeating linear pattern on a grid.

Background
Transferring a linear pattern to a two-dimensional grid requires children to use spatial skills and algebraic reasoning. Wrapping a repeated pattern from one row to the next on a grid will enhance children’s ability to read real-life grids such as calendar months and hundred charts.

Get Started
Draw 9 connected boxes across the chalkboard and shade the following AAB pattern:

You could also tape squares of construction paper together and beginning with A, take them apart and move them into the grid.

Then draw the grid shown below on the chalkboard. Begin to fill in the grid with the linear pattern shown above. Have children help you by asking them the following questions:

- Look at the first row of this quilt. Which color is in the first box? (white) Second box? (white) Third box? (black) Fourth box? (white)
- Look at the second row of this quilt. What color do you think should be in the first box if we continue the pattern? (white) Second box? (black) Third box? (white) Fourth box? (white)
  Continue in this manner until the entire grid is filled with color, or shaded.
- Do you see any color patterns? (diagonal lines of black or white)

Today’s Challenge
Student page 81 Have children complete the activity on the student page.

Answers for student page 81: 1. red, red, blue, red, red, blue, red, red, blue, red, red, blue, red, red, red, blue, red, red, red, 2. blue, red, red, blue, red, red, red, blue, red, 3.

Go Further
Student page 81 Have children complete the activity on the student page.

Answers for student page 81:

Assessment
Student self-assessment page 81 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children use two colors to draw a repeating linear pattern on a grid?
Materials
Student page 82
Math Maze cards (Week 17 Activity 82)

Concepts
Count to 50.
Find numbers before, after, and between given numbers.

Get Started
Write the numbers 1 through 50 on the board as shown below, one row at a time:

1 2 3 4 5 6 7 8 9 10
11 12 13 14 15 16 17 18 19 20
21 22 23 24 25 26 27 28 29 30
31 32 33 34 35 36 37 38 39 40
41 42 43 44 45 46 47 48 49 50

Review with children counting from 1 through 10, 11 through 20, 21 through 30, 31 through 40, and finally 41 through 50 as you write each row of numbers. Ask children if they notice a pattern to the counting process.

Write the following problems on the board. Review the words after, before, and between. Have the children say the missing number and then write the number in the blank.

29, __ 36 __ 50
__, 21 49, __ 39, __ 41

Today’s Challenge
Distribute the 18 Math Maze cards for Week 17. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child’s card.

The correct sequence of questions and answers is shown on page 196.

Student page 82 When the group has finished playing the game, have children open their books and complete the Today’s Challenge activity on page 82 in the student book.

Answers for student page 82: Answers for the chart are shown in boldface type.

<p>| | | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>11</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td>16</td>
<td>17</td>
<td>18</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td>21</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
<td>26</td>
<td>27</td>
<td>28</td>
<td>29</td>
<td>30</td>
</tr>
<tr>
<td>31</td>
<td>32</td>
<td>33</td>
<td>34</td>
<td>35</td>
<td>36</td>
<td>37</td>
<td>38</td>
<td>39</td>
<td>40</td>
</tr>
<tr>
<td>41</td>
<td>42</td>
<td>43</td>
<td>44</td>
<td>45</td>
<td>46</td>
<td>47</td>
<td>48</td>
<td>49</td>
<td>50</td>
</tr>
</tbody>
</table>

1. 30 2. 49 3. 20 4. 19 5. 10 6. 40

Go Further
Student page 82 Have children complete this section on the student page. Children might write a number on each fish as it is counted. Or, children can ring groups of 10 fish to organize or check their counting.

Answers for student page 82: 7. There are 47 fish.

Assessment
Student self-assessment page 82 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tips Can children count from 1 through 50? Can children find missing numbers in a short sequence?
Materials
Student page 83
Blank paper

Concept
Review numbers in the twenties.

Get Started
Write numbers 20 through 29 on the board. Have children count along as you write the numbers.

20 21 22 23 24 25 26 27 28 29

Student page 83 Have children use the information on the board to answer the questions in the Get Started section of page 83 in their books.

Answers for student page 83: 1. yes, no, no 2. yes, yes

Today's Challenge
Explain that today you will be playing a game called “Who Wants to be the Top Scorer?” Have each take a blank sheet of paper and write a number between 20 and 29 on top of the paper. Then ask children to number their papers from 1 to 5.

As you ask each of five questions, have children look at their number and answer the question. Yes answers will score tally points. Here are the questions to ask:

1. Is your number an odd number? If yes, score one tally point.
2. Is your number smaller than 29? If yes, score one tally point.
3. Is your number more than two tens and eight ones? If yes, score two tally points.
4. Is your number one less than 23? If yes, score 2 tally points.
5. Is your number 20 + 6? If yes, score 3 tally points.

Have children find their total scores. Determine which child has the highest score. Have that child write his or her number on the board and explain the points.

Go Further
Student page 83 Have children solve the riddle and create another riddle for a friend to solve. Have the solver sign his or her name.

Answers for student page 83: 3. 26 4. Answers will vary.

Assessment
Student self-assessment page 83 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children recognize numbers in the twenties?
Materials
Student page 84
Math Jumble activity poster and 0–7 digit cards

Concept
Recognize facts for 6 and 7.

Get Started
Begin by reviewing facts for 6. Call out any number from 0 through 6. Have children show with their fingers how many more are needed to make a total of 6. Choose one child to say aloud the correct answer. Repeat several times for sums of 6, then switch to sums of 7.

Today’s Challenge
Using the 0–7 numeral cards, construct the 4 by 4 poster shown. Explain that the object of today’s Math Jumble is to make as many facts as possible with sums of 6 or 7. The numbers should be adjoining (left to right or top to bottom) and may be used more than once. Record a few of the facts the children make.

Possible facts:

<table>
<thead>
<tr>
<th>Sum of 6</th>
<th>Sum of 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 + 0 = 6</td>
<td>0 + 7 = 7</td>
</tr>
<tr>
<td>3 + 3 = 6</td>
<td>6 + 1 = 7</td>
</tr>
<tr>
<td>2 + 4 = 6</td>
<td>2 + 5 = 7</td>
</tr>
<tr>
<td>1 + 5 + 6</td>
<td>4 + 3 = 7</td>
</tr>
</tbody>
</table>

Student page 84 Have children use the Math Jumble on student page 87 to find facts with sums of 6 and 7. Numbers should be adjoining (left to right or top to bottom) and may be used more than once.

Possible answers for student page 84:
1. 
2. 

<table>
<thead>
<tr>
<th>Sum of 6</th>
<th>Sum of 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 + 0 = 6</td>
<td>0 + 7 = 7</td>
</tr>
<tr>
<td>3 + 3 = 6</td>
<td>6 + 1 = 7</td>
</tr>
<tr>
<td>2 + 4 = 6</td>
<td>2 + 5 = 7</td>
</tr>
<tr>
<td>1 + 5 + 6</td>
<td>4 + 3 = 7</td>
</tr>
</tbody>
</table>

Go Further
Student page 84 Using the grid on the student page, have each child create a Math Jumble to share with a friend.

Answers for student page 84: 3. Answers will vary. Accept any correct fact sentences. They need not be limited to facts for 6 and 7.

Assessment
Student self-assessment page 84 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children recognize sums for 6 and 7?
**Materials**
Student page 85
Blank paper

**Concept**
Identify 6, 7, 8, and 9 in the context of a ten-frame.

**Get Started**
Draw a ten frame on the blackboard. Draw 5 shaded circles in the ten-frame as shown. Demonstrate counting the shaded circles and writing the numeral that describes the quantity.

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>

Point out that ten frames are filled one row at a time. That makes it easy to see if you have more or less than five. Draw six shaded circles. Since you know there are five in the top row, you can count on from five, then see quickly that there are six. Repeat using seven, eight, or nine shaded circles, as well as five and six again, until the children are at ease using the ten-frame as a counting tool.

**Student page 85** To introduce the activity, work through the first problem on student page 85. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask for a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (6) is wrong because “there are more than 6 circles in the ten-frame.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (9) is correct.

**Today’s Challenge**
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

**Student page 85** Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

**Answers for student page 85:** 1. 7 2. 8

When all children’s papers have been scored, determine the high scorer(s) for the day.

**Go Further**
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

**Assessment**
**Student self-assessment page 85** Have children circle one of the three choices to describe how they feel about this activity.

**Assessment tip** Can the children identify the quantities of 6, 7, 8, and 9 when represented in a ten-frame?
Materials
Student page 86

Concept
Recognize patterns for addition facts for sums of 5, 6, and 7.

Background
By listing the addition facts in an organized list for a specified sum, children can see all the different pairs of addends that are equal to that sum. The commutative (order) and identity (zero) properties of addition become quite apparent. This can enable children to learn the addition facts faster and retain them longer.

Get Started
Write the list of addition facts for the sums of 5 on the board.

Sums of 5
5 + 0 = 5
4 + 1 = 5
3 + 2 = 5
2 + 3 = 5
1 + 4 = 5
0 + 5 = 5

Then ask children the following questions:
• What do you notice about all the answers? (They are the same.)
• What do you notice about the first numbers in each fact? (Each one is less than the one before it.)
• What do you notice about the second numbers in each fact? (Each number is greater than the one before it.)

• Can you find pairs of facts with the same numbers? Which pairs are they? (5 + 0 = 5 and 0 + 5 = 5, 4 + 1 = 5 and 1 + 4 = 5, 3 + 2 = 5 and 2 + 3 = 5)
• What is special about zero being added to a number? (The sum is that same number.)

Today’s Challenge
Student page 86 Have children complete the activity on the student page.

Answers for student page 86: 1. 0, 1, 2, 3, 4, 5, 6 2. 0, 1, 2, 3, 4, 5, 6, 7

Go Further
Student page 86 Have children complete the activity on the student page.

Answers for student page 86: 3. 2, 2 + 4 4. 5, 1 + 5 5. 1, 1 + 6

Assessment
Student self-assessment page 86 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children recognize patterns for addition facts for sums of 5, 6, and 7?
Materials
Student page 87
Math Maze cards (Week 18 Activity 87)
Cube, rectangular solid, cylinder, cone, and sphere (models or classroom objects)

Concept
Identify three-dimensional solids and their attributes.

Background
It is important for children to recognize a three-dimensional solid and be able to name it. Studying about shapes and solids can help children develop and enhance their spatial sense.

Get Started
Review with children the name of each solid. Use models or point out solids in the room for each figure. Also point out the edges and faces on each figure.

6 square faces  6 faces  2 round faces
edge cube  edge box  2 curved edges can

1 round face
1 curved edge cone

Look around the room for different solids and ask children to name them. For example:
What solid does a container of juice look like? (can)
What solid does a soccer ball look like? (ball)
What solid does a carton of crayons look like? (box)
What solid does an alphabet block look like? (cube)
What solid does a funnel look like? (cone)

Today's Challenge
Distribute the 18 Math Maze cards for Week 18. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze
Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child’s card. Some answers are pictures. In that case, children can describe the picture or draw it on the board.

Note: When the question asks for a picture of a solid the answer card will show a simple solid figure. When the question asks for an object the answer card will show a sketch of a familiar 3-D object.

The correct sequence of questions and answers is shown on page 197.

Student page 87 When the group has finished playing the game, have children open their books and complete the Today’s Challenge activity on page 87 in the student book.

Answers for student page 87: 1.

2.  3.  4.  5.

Go Further
Student page 87 Have children complete this section on the student page.

Answers for student page 87: 6. Drawings will vary.

Assessment
Student self-assessment page 87 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children identify three-dimensional solids and real life objects containing them?
Materials
Student page 88

Concept
Select appropriate tools for measuring.

Get Started
Explain to children that there are many tools for measuring length, time, and temperature.

Draw the different tools on the board and write their names.

![Clock, Ruler, Calendar, Thermometer]

Have children share their own experiences with measuring. Ask:

- When you are sick, what would the doctor use to measure your temperature? (thermometer)
- When you want to find out how long until recess, what would you look at? (clock)
- When you want to find what day your birthday is, what would you look at? (calendar)
- When you want to see how tall a plant has grown, what would you use? (ruler)

Today’s Challenge
Student page 88 Explain that today you will be playing a game called “Who Wants to be the Top Scorer?” Have children loop a measurement tool on the student page they would like to use to play the game. As you ask each of five questions, have children look at their tool and answer the question. If their answer is yes, then they are to make a checkmark. Each yes answer, or checkmark, will score a point. Here are the questions to ask:

1. Does your measurement tool tell you the name of the month? If yes, make a checkmark.
2. Does your measurement tool help you know how cold it is outside? If yes, make a checkmark.
3. Does your measurement tool help you know what time you wake up? If yes, make a checkmark.
4. Does your measurement tool help you find out how much you have grown? If yes, make a checkmark.
5. Does your measurement tool help you know what time a movie started? If yes, make a checkmark.

Top scorer(s) will have a clock.

Have children find their total scores by counting their checks. Ask a volunteer to name his or her tool and explain the score.

Go Further
Student page 88 Have children write the places they see the clocks on the page.

Answers for student page 88: Answers will vary.
Possible answers: person’s arm, bedroom, living room, kitchen.

Assessment
Student self-assessment page 88 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Are children able to identify the appropriate tool for measuring?
Math Jumble

Week 18 • Activity 89

Materials
Student page 89
Math Jumble activity poster and 0–8 domino cards

Concept
Recognize combinations for 7 and 8.

Get Started
Begin by reviewing facts for 7. Call out any number from 0 through 7. Have children show with their fingers how many more are needed to make a total of 7. Choose one child to say aloud the correct answer. Repeat several times for sums of 7, then switch to sums of 8.

Today's Challenge
Using 0–8 domino cards, construct the 4 by 4 poster shown. Explain that the object of today's Math Jumble is to make as many addition facts as possible with sums of 7 and 8. Addends should be adjoining (left to right or top to bottom). Dominos can be used more than once. Draw the dominos to record a few of the combinations children make. Write the addition fact under each combination.

Possible facts:

<table>
<thead>
<tr>
<th>Sum of 7</th>
<th>Sum of 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 + 0 = 7</td>
<td>0 + 8 = 8</td>
</tr>
<tr>
<td>1 + 6 = 7</td>
<td>1 + 7 = 8</td>
</tr>
<tr>
<td>2 + 5 = 7</td>
<td>6 + 2 = 8</td>
</tr>
<tr>
<td>3 + 4 = 7</td>
<td>5 + 3 = 8</td>
</tr>
<tr>
<td></td>
<td>4 + 4 = 8</td>
</tr>
</tbody>
</table>

Student page 89 Have children use the Math Jumble on the student page 89 to find pairs of adjoining dominos with sums of 7 and 8. Then have the children draw the dominos to make facts. Dominos can be used more than once. For example, the 1 and the 6 in the first column can be added together to make the sum of 7. The 1 and 7 in the first row can be added together to make the sum of 8.

Possible answers for student page 89:
1. 2.

<table>
<thead>
<tr>
<th>Sum of 7</th>
<th>Sum of 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Domino] + [Domino] = 7</td>
<td>[Domino] + [Domino] = 8</td>
</tr>
<tr>
<td>[Domino] + [Domino] = 7</td>
<td>[Domino] + [Domino] = 8</td>
</tr>
<tr>
<td>[Domino] + [Domino] = 7</td>
<td>[Domino] + [Domino] = 8</td>
</tr>
<tr>
<td>[Domino] + [Domino] = 7</td>
<td>[Domino] + [Domino] = 8</td>
</tr>
</tbody>
</table>

Go Further
Student page 89 Have the children complete the pictures to make 7 and 8, and write facts to match the pictures.

Answers for student page 89: 3. draw 4 apples; 3 + 4 = 7 4. draw 5 bananas; 3 + 5 = 8

Assessment
Student self-assessment page 89 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tips Can children recognize sums for 7 and 8? Can children write additions fact sentences?
Materials
Student page 90
Pennies
Blank paper

Concept
Identify problem situations that require subtraction.

Get Started
Display two stacks of real or plastic pennies with 4 in one stack and 7 in the other. Write the following questions on the board: How many pennies in all? How many more pennies are in the taller stack? Discuss the questions one at a time.
Remind the children that adding is putting groups together. Count the pennies to answer the first question. (11 pennies in all)
Then tell the children that subtracting is finding the difference between two groups. Count out the pennies in the tall stack, and write the amount (7) on the board. Count the short stack and write that amount (4) on the board. Have someone tell how many more are in the tall stack. (3) Explain to the children that taking away, or taking groups apart is another way of subtracting. Then ask, how many would I take away from the tall stack to have the same number of pennies as in the short stack? (3)
It is not easy to see that taking away is the same operation as finding the difference, so repeat the exercise with different numbers of pennies in each stack.

Student page 90 To introduce the activity, work through the first problem on student page 90. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (How many marbles are in the jar?) is wrong because “you can count to find an answer.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (How many marbles are left after you lose 5?) is correct.

Today’s Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.
Then explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 90 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 90: 1. How many more grapes did Asa eat than Vin? 2. How much more is 10 than 4?
When all children’s papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 90 Have children circle one of the three choices to describe how they feel about this activity.
Assessment tip Can the children identify story problems that require subtraction?
Pattern Puzzler

Week 19•Activity 91

Materials
Student page 91

Concept
Recognize patterns for addition facts for sums of 8, 9, and 10.

Background
By listing the addition facts in an organized list for a specified sum, children can see all the different pairs of addends that are equal to that sum. The commutative (order) and identity (zero) properties of addition become quite apparent. This can enable children to learn the addition facts faster and retain them longer.

Get Started
Write the list of addition facts for the sums of 8 on the board.

Sums of 8
8 + 0 = 8
7 + 1 = 8
6 + 2 = 8
5 + 3 = 8
4 + 4 = 8
3 + 5 = 8
2 + 6 = 8
1 + 7 = 8
0 + 8 = 8

Then ask children the following questions:
• What do you notice about all the answers? (They are the same.)
• What do you notice about the first numbers in each fact? (Each one is less than the one before it.)

• What do you notice about the second numbers in each fact? (Each number is greater than the one before it.)
• Which addition fact is a "double"? (4 + 4 = 8)
• Can you find pairs of facts with the same numbers? Which pairs are they? (8 + 0 = 8 and 0 + 8 = 8, 7 + 1 = 8 and 1 + 7 = 8, 6 + 2 = 8 and 2 + 6 = 8, 5 + 3 = 8 and 3 + 5 = 8)
• What is special about zero being added to a number? (The sum is that number.)

Today's Challenge
Student page 91 Have children complete the activity on the student page.

Answers for student page 91: 1, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 2, 1, 2, 3, 4, 5, 6, 7, 8, 9

Go Further
Student page 91 Have children complete the activity on the student page.

Answers for student page 91: 3, 7, 7 + 2
4, 2, 8 + 2 5, 6, 6 + 3

Assessment
Student self-assessment page 91 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children recognize patterns for addition facts for sums of 8, 9, and 10?
Materials
Student page 92
Math Maze cards (Week 19 Activity 92)

Concept
Use algebraic thinking to practice sums through 8.

Get Started
Review sums of 7 and 8 with children. Write the problems at the right on the board. Have the children say and write the sums.

<table>
<thead>
<tr>
<th>Sums of 7</th>
<th>Sums of 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 + 3 = ___</td>
<td>4 + 4 = ___</td>
</tr>
<tr>
<td>5 + 2 = ___</td>
<td>5 + 3 = ___</td>
</tr>
<tr>
<td>6 + 1 = ___</td>
<td>6 + 2 = ___</td>
</tr>
<tr>
<td>7 + 0 = ___</td>
<td>7 + 1 = ___</td>
</tr>
<tr>
<td>8 + 0 = ___</td>
<td></td>
</tr>
</tbody>
</table>

Use the set of problems at the right again. This time, erase one or both of the addends so that children can write in the missing numbers.

Children may draw pictures to find the sums or check their answers.

Today’s Challenge
Distribute the 18 Math Maze cards for Week 19. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child’s card.

Allow children to write the addition sentence questions on the board instead of reading them.

Note: Same answer boxes mean the same number. For example, ● + ● = 4 means 2 + 2 = 4, but △ + △ = 4 means 1 + 3 = 4. Also, a ● does not always represent the number 2; a ● could represent the number 3 in the addition sentence ● + 1 = 4.

The correct sequence of questions and answers is shown on page 198.

Student page 92 When the group has finished playing the game, have children open their books and complete the Today’s Challenge activity on page 92 in the student book.

Answers for student page 92: 1. sum of 5: 2+3, 5+0, 1+4; sum of 6: 3+3, 0+6, 5+1, 4+2; sum of 7: 1+6, 3+4, 5 + 2, 7+0; sum of 8: 7 + 1, 8 + 0, 2 + 6

Go Further
Student page 92 Have children complete this section on the student page. For the number sentence △ + △ + △ = 8, the first △ represents the same number as the second △.

Answers for student page 92: 2. Five solutions are possible: 0 + 0 + 8 = 8, 1 + 1 + 6 = 8, 2 + 2 + 4 = 8, 3 + 3 + 2 = 8, 4 + 4 + 0 = 8.

Assessment
Student self-assessment page 92 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children find sums through 8?
Materials
Student page 93
Blank paper

Concept
Review the days of the week.

Get Started
Write the days of the week on the board. Have children say the names as you write them.

Monday Tuesday Wednesday Thursday Friday Saturday Sunday

Student page 93 Have children use the information on the board to answer the questions in the Get Started section of page 93 in their books.

Answers for student page 93: 1. yes, no, yes 2. yes, yes, no

Today's Challenge
Explain that today you will be playing a game called "Who Wants to be the Top Scorer?" Have each child take a blank sheet of paper and write a day of the week on top of the paper. Then ask children to number their papers from 1 to 5.

As you ask each of five questions, have children look at their numbers and answer the question. Yes answers will score tally points. Here are the questions to ask:

1. Is your day a weekday? If yes, score one tally point.
2. Does your day start with the letter t? If yes, score one tally point.
3. Is your day part of the weekend? If yes, score two tally points.
4. Does your day come right after Sunday? If yes, score 2 tally points.
5. Does your day come right before Friday? If yes, score 3 tally points.

Have children find their total scores. Determine which child has the highest score. Have that child write his or her number on the board and explain the points.

Go Further
Student page 93 Have children solve the riddle and create another riddle for a friend to solve. Have the solver sign his or her name.


Assessment
Student self-assessment page 93 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children recognize the order of the days of the week?
Materials
Student page 94
Math Jumble activity poster and penny and nickel coin cards

Concepts
Recognize coin combinations for 7 and 8.
Count mixed change.

Get Started
Begin by reviewing how to count coin combinations up to eight cents. Ask, "How much is five pennies worth?" (5 cents) "How much is one nickel worth?" (5 cents) "How much is one nickel and one penny worth?" (6 cents) Continue with similar examples until the children are comfortable with adding pennies and a nickel.

Today’s Challenge
Using the penny and nickel coin cards, construct the 3 by 3 poster shown. Explain that the object of today’s Math Jumble is to find combinations for 7 and 8 cents. Combinations should be made by adding any two adjoining numbers of coins (top to bottom or left to right) from the poster. Draw coins cards for each combination on the chalkboard and record the fact underneath. Make sure that children understand the use of the cent sign.

Possible answers:

<table>
<thead>
<tr>
<th>Sum of 7¢</th>
<th>Sum of 8¢</th>
</tr>
</thead>
<tbody>
<tr>
<td>1¢ + 6¢ = 7¢</td>
<td>1¢ + 7¢ = 8¢</td>
</tr>
<tr>
<td>2¢ + 5¢ = 7¢</td>
<td>2¢ + 6¢ = 8¢</td>
</tr>
<tr>
<td>3¢ + 4¢ = 7¢</td>
<td>3¢ + 5¢ = 8¢</td>
</tr>
</tbody>
</table>

Student page 94 Have children complete Today’s Challenge on student page 94 to find sums of 7 and 8. Combinations should be made by adding any two adjoining numbers of coins (top to bottom or left to right).

Possible answers for student page 94:
1. 2.

<table>
<thead>
<tr>
<th>Sum of 7¢</th>
<th>Sum of 8¢</th>
</tr>
</thead>
<tbody>
<tr>
<td>1¢ + 6¢ = 7¢</td>
<td>1¢ + 7¢ = 8¢</td>
</tr>
<tr>
<td>2¢ + 5¢ = 7¢</td>
<td>2¢ + 6¢ = 8¢</td>
</tr>
<tr>
<td>3¢ + 4¢ = 7¢</td>
<td>3¢ + 5¢ = 8¢</td>
</tr>
</tbody>
</table>

Go Further
Student page 94 Children write addition fact sentences on student page 94.

Answers for student page 94: 3. 5¢ + 2¢ = 7¢; 4. 4¢ + 4¢ = 8¢

Assessment
Student self-assessment page 94 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children recognize coin combinations for 7 cents and 8 cents? Can children write addition fact sentences?
Materials
Student page 95
Blank paper

Concept
Identify the lightest object of a set.

Get Started
Display a variety of classroom objects with obviously different weights. Ask children to differentiate between the heaviest and lightest objects. Have the class sequence sets of three objects from lightest to heaviest and heaviest to lightest.

Student page 95 To introduce the activity, work through the first problem on student page 95. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (a doghouse is wrong because “the doghouse is probably the heaviest, not the lightest.” (if members of the class do not agree with the volunteer's response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (a fork) is correct.

Today's Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today's activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 95 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 95: 1. note pad 2. feather

When all children's papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 95 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children identify the lightest object of a set?
Materials
Student page 96
Pennies, nickels, and dimes

Concept
Recognize the coin pattern of pennies, nickels, and dimes for amounts up to 30 cents.

Get Started
Review with children the name and value of each coin. You might want to have children exchange five pennies for one nickel and ten pennies, or two nickels for one dime to show equivalent values.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 cent</td>
<td>5 cents</td>
<td>10 cents</td>
</tr>
<tr>
<td>1¢</td>
<td>5¢</td>
<td>10¢</td>
</tr>
</tbody>
</table>

Draw a chart on the board such as the one shown below, except for the numbers (answers) shown in parentheses. Ask children to help you fill in the chart by asking them these questions:

- How many dimes would you use to make 10 cents? (one) Do you need any pennies or nickels? (no)
- How many dimes would you use to make 11 cents? (one) Do you need any pennies or nickels? (yes, one penny)
- How many dimes would you use to make 12 cents? (one) Do you need any pennies or nickels? (yes, two pennies)
- How many dimes would you use to make 13 cents? (one) Do you need any pennies or nickels? (yes, three pennies)
- How many dimes would you use to make 14 cents? (one) Do you need any pennies or nickels? (yes, four pennies)

<table>
<thead>
<tr>
<th>Amount</th>
<th>Dimes</th>
<th>Nickels</th>
<th>Pennies</th>
</tr>
</thead>
<tbody>
<tr>
<td>10¢</td>
<td>(1)</td>
<td>(0)</td>
<td>(0)</td>
</tr>
<tr>
<td>11¢</td>
<td>(1)</td>
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<td>12¢</td>
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<tr>
<td>13¢</td>
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<tr>
<td>14¢</td>
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<tr>
<td>15¢</td>
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<td>17¢</td>
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<td>18¢</td>
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<tr>
<td>19¢</td>
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<td>(4)</td>
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<tr>
<td>20¢</td>
<td>(2)</td>
<td>(0)</td>
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</tr>
</tbody>
</table>

- How many dimes would you use to make 15 cents? (one) Do you also need any pennies or nickels? (yes, five pennies or one nickel) How can you make 15 cents with the fewest number of coins? (one dime and one nickel)
- Using the fewest number of coins, how many dimes, nickels, and pennies do you need to have 16 (17, 18, 19, 20) cents? (See chart.)
- What pattern do you notice about the coins as you have more and more money? (The number of pennies and the number of nickels repeat.)

Today’s Challenge
Student page 96 Have children complete the activity on the student page.

Answers for student page 96: 1. 23¢, 0; 24¢, 2, 4; 25¢, 1; 26¢, 2, 1; 27¢, 2, 1; 28¢, 2, 3; 29¢, 1, 4; 30¢, 3, 0

Go Further
Student page 96 Have children complete the activity on the student page. Tell children they may use dimes and nickels, if needed.

Answers for student page 96: 2. 3 dimes; 2 dimes and 2 nickels; 1 dime and 4 nickels. Allow children to use coins to cover the circles, if needed.

Assessment
Student self-assessment page 96 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children recognize the coin pattern of pennies, nickels, and dimes for amounts up to 30 cents?
Math Maze

Materials
Student page 97
Math Maze cards (Week 20 Activity 97)

Concepts
Count to 100.
Find numbers before, after, and between given numbers.

Background
When counting to 100, the ones digits 0 through 9 will repeat for every decade (teens, twenties, thirties, etc.). It is important for children to recognize this counting pattern.

Get Started
Review the numbers 51 through 100 and write them on the board as shown below, one row at a time:

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
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<td>100</td>
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<td></td>
</tr>
</tbody>
</table>

Ask children say a certain sequence of 10 numbers without looking at the board. For example, count from 65 to 75. Or, for example, count to 100 starting from 88.

Write the following problems on the board. Review the words after, before, and between. Have children say the missing numbers and then write the numbers in the blanks.

66, __, __, 71
80, __, 82

89, __

90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

1. 74 2. 69 3. 80 4. 59 5. 100 6. 88

Go Further
Student page 97 Have children complete this section on the student page. Children might write a number on each fish as it is counted. Or, children can ring groups of 10 stars to organize or check their counting.

Answers for student page 97: There are 83 stars.

Assessment
Student self-assessment page 97 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children count from 1 through 100?
Materials
Student page 98
Blank paper

Concept
Review the months in a year.

Get Started
Write the months of the year on the board. Have children say the names as you write them. Discuss characteristics of each month, for example birthdays, the weather, seasons, and order of months.

January  February  March
April      May      June
July       August    September
October    November December

Today's Challenge
Explain that today the class will be playing a game called “Fantastic Finalist.” Write the name of each month on a separate piece of paper. Now write the abbreviations for each month on separate pieces of paper. Give each child a piece of paper with a month or an abbreviation written on it.

You do not have to use all the months, but be sure that one child receives September and/or Sept. since that month will be the “Fantastic Finalist.”

Have all children hold their months and stand in a large circle. Explain that the object of the game is to be the “Fantastic Finalist,” the last child to remain standing.

Read each of the following challenges, one at a time.
• If your month starts with the letter j, sit down. (January, Jan., June, July)
• If your month comes right before or right after March, sit down. (February, Feb., April)
• If your month starts with the letter m, sit down. (March, May)
• If your month is the last month in the year, sit down. (December, Dec.)
• If your month comes right before or right after September, sit down. (August, Aug., October, Oct.)
• If your month is the eleventh month, sit down. (November, Nov.)

At this point, only the children holding September or Sept. should still be standing. These children are the Fantastic Finalists.

Go Further
Student page 98 Have children complete the activity on the student page.


Assessment
Student self-assessment page 98 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children know the order of the months of the year?
Materials
Student page 99
Math Jumble activity poster and 1–8 digit cards

Concepts
Recognize combinations for 7 and 8.
Write addition facts for sums of 7 and 8.

Get Started
Begin by reviewing facts for 7. Call out any number from 0 through 7. Have children show with their fingers how many more are needed to make a total of 7. Choose one child to say aloud the correct answer. Repeat several times for sums of 7, then switch to sums of 8.

Today’s Challenge
Using the 1–8 digit cards, construct the 4 by 4 poster shown. Explain that the object of today’s Math Jumble is to make as many addition facts as possible with sums of 7 and 8. Fact equations can be made by adding any two adjoining numbers (top to bottom or left to right) from the poster. Numbers on the poster can be used more than once, but the sums must be 7 and 8. Record a few of the facts children make.

Possible facts:

<table>
<thead>
<tr>
<th>Sum of 7</th>
<th>Sum of 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 + 1 = 7</td>
<td>1 + 7 = 8</td>
</tr>
<tr>
<td>2 + 5 = 7</td>
<td>2 + 6 = 8</td>
</tr>
<tr>
<td>3 + 4 = 7</td>
<td>4 + 4 = 8</td>
</tr>
<tr>
<td></td>
<td>5 + 3 = 8</td>
</tr>
</tbody>
</table>

Student page 99 Have children complete Today’s Challenge on student page 99. Children should look for adjoining pairs of numbers (left to right or top to bottom) to make sums of 7 and 8.

Possible answers for student page 99:
1. 6 + 1 = 7
2. 2 + 5 = 7
3. 3 + 4 = 7
4. 1 + 7 = 8
5. 2 + 6 = 8
6. 4 + 4 = 8
7. 5 + 3 = 8

Go Further
Student page 99 Have the children draw the missing dots to complete the ten frames to make 7 and 8. Then children write the facts to match.

Answers for student page 99:
3. draw 4 dots; 3 + 4 = 7
4. draw 1 dot; 6 + 1 = 7
5. draw 6 dots; 2 + 6 = 8
6. draw 4 dots; 4 + 4 = 8

Assessment
Student self-assessment page 99 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tips Can children recognize sums for 7 and 8? Can children write addition facts for sums of 7 and 8?
Rule Out Two

Week 20•Activity 100

Materials
Student page 100
Blank paper

Concept
Identify two-dimensional shapes.

Get Started
Draw and label a circle, a square, a rectangle, and a triangle on the chalkboard. Relate items from the classroom environment to the various shapes. Discuss each shape and its distinguishing attributes.

• A circle is round and has no corners.
• A triangle has three straight sides and three corners.
• A square has four straight sides that are all exactly the same length. A square also has four corners that are all the same, and you can fit the corner of a piece of paper into any corner of a square.
• A rectangle has four corners just like a square, but a rectangle might have two longer sides and two shorter sides.

Student page 100 To introduce the activity, work through the first problem on student page 100. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can "rule out" some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (clock) is wrong because "the clock is a circle." (If members of the class do not agree with the volunteer's response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (envelope) is correct.

Today's Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today's activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 100 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 100: 1. pennant 2. ice cream cone
When all children's papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 100 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children identify a circle, a square, a rectangle, and a triangle?
Materials
Student page 101
8 squares each of white and black construction paper
Tape
Red and blue crayons or markers

Concept
Use two colors to draw a repeating linear pattern on a square grid.

Background
Transferring a linear pattern to a two-dimensional grid requires children to use spatial skills and algebraic reasoning. Wrapping a repeated pattern from one row to the next on a grid will enhance children’s ability to read real-life grids such as calendar months and hundred charts.

Get Started
Tape squares of white and black construction paper in an AB pattern on the chalkboard. Draw a large $4 \times 4$ grid on the chalkboard. Begin to fill in the grid with the linear pattern shown above. Ask the following questions:

- Look at the first row of this quilt. Which color is in the first box? (white) Second box? (black) Third box? (white) Fourth box? (black)
- Look at the second row of this quilt. What color do you think should be in the first box if we continue the pattern? (white) Second box? (black) Third box? (white) Fourth box? (black)
- Look at the grid. Do you see a pattern? Why was that pattern made? (There are white and black columns. The white/black pattern takes 2 spaces each time, and there are 4 spaces in each row.)

Draw a $5 \times 5$ grid on the board. Have children help you fill in the grid with the AB pattern as shown. After it is filled in, ask:

- Look at the grid. Do you see a pattern? Why is it different than before? (Possible response: The diagonal lines are black or white. The white and black pattern takes 2 squares each time and there are 5 squares in each row so the next row starts with the opposite color.)

Today's Challenge
Student page 101 Have children complete the activity on the student page.

Answers for student page 101: 1. red, blue, red, blue, red, blue, red, blue, red, blue, red, blue, red, blue

4. The red and blue pattern takes 2 squares each time. Because there are 5 squares in each row in exercise 2, the next row starts with the opposite color. There are 6 squares in each row in problem 3 so the next row starts with the same color as the previous.)

Go Further
Student page 101 Have children complete the activity on the student page.

Answers for student page 101:

5. Talk about the pattern with children and why this grid has columns of red and blue.

Assessment
Student self-assessment page 101 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children use two colors to draw a repeating linear pattern on a square grid?
Materials
Student page 102
Math Maze cards (Week 21 Activity 102)
Pennies, nickels, and dimes

Concepts
Find the value of a set of pennies, nickels, and dimes up to 30¢.
Review counting by fives and tens up to 30.

Get Started
Review with children the name and value of each coin. Make sure they can identify a dime, a nickel, and a penny by its head and tail.

![Coins](image)

- 1 penny = 1¢
- 1 cent = 1¢
- 1 nickel = 5¢
- 5 pennies = 5¢
- 5 cents = 5¢
- 1 dime = 10¢
- 10 cents = 10¢

You might have some children exchange 1 nickel for 5 pennies, 1 dime for 10 pennies, or 2 nickels for 1 dime to make sure they understand the equivalent values.

Remember, when counting amounts of money consisting of two or more different kinds of coins, start with the coin with the most value first, then count on using the coin with the next highest value, and finally count on for the pennies. For example, when counting amounts of money consisting of dimes, nickels, and pennies, first count by tens for all the dimes, then count on by fives for all the nickels, and finally count on by ones for all the pennies. Review counting by fives and tens up to 30, if needed.

Today's Challenge
Distribute the 18 Math Maze cards for Week 21. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?”

Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child’s card. Those children needing extra help may use pennies, nickels, and dimes to answer the question.

The correct sequence of questions and answers is shown on page 199.

Student page 102 When the group has finished playing the game, have children open their books and complete the Today's Challenge activity on page 102 in the student book.

Answers for student page 102:
1.
2.
3.
4.
5.
6.

Go Further
Student page 102 Have children complete this section on the student page. Children can draw circles with the letters P, N, or D or the amounts 1¢, 5¢, or 10¢ on the circles to indicate pennies, nickels, and dimes. Use coin stamps if they are available.

Answers for student page 102: 7. 2 dimes, 1 nickel 8. 1 dime, 3 nickels, 1 penny

Assessment
Student self-assessment page 102 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children find the value of sets of dimes, nickels, and pennies for amounts up to 30¢?
Materials
Student page 103

Concept
Select appropriate tools for measuring.

Get Started
Explain to children that there are many tools for measuring length, time, and temperature.

Draw the different tools on the board and write their names.

(clock) (ruler) (calendar) (thermometer)

Have children share their own experiences with measuring. Ask:
• When it is cold outside, what would you use to measure the temperature? (thermometer)
• When you want to find out how long until lunch, what would you look at? (clock)
• When you want to find what day it is, what would you look at? (calendar)
• When you want to see how long your foot is, what would you use? (ruler)

Today's Challenge
Student page 103 Explain that today you will be playing a game called “Who Wants to be the Top Scorer?” Have children loop a measurement tool on the student page they would like to use to play the game. As you ask each of five questions, have children look at their tool and answer the question. If their answer is yes, then they are to make a checkmark. Each yes answer, or checkmark, will score a point. Here are the questions to ask:

1. Does your measurement tool tell you the date? If yes, make a checkmark
2. Does your measurement tool help you know how hot it is outside? If yes, make a checkmark
3. Does your measurement tool help you know how long your paper is? If yes, make a checkmark
4. Does your measurement tool help you know what time to go to sleep at night? If yes, make a checkmark
5. Does your measurement tool help you find out how much you have grown? If yes, make a checkmark

Top scorer(s) will have a ruler.

Have children find their total scores by counting their checks. Ask a volunteer to name his or her tool and explain the score.

Go Further
Student page 103 Have children draw three things that are about the length of their foot.

Answers for student page 103: Answers will vary.
Check children’s work to see if answers are appropriate.

Assessment
Student self-assessment page 103 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Are children able to identify the appropriate tool for measuring?
Materials
Student page 104
Math Jumble activity poster and 1–9 domino cards

Concept
Use mental math for finding combinations for 8 and 9.

Get Started
Begin by reviewing facts for 8 and 9. Draw any domino half from 0 through 8 on the board. Have a volunteer come to the board to draw another domino half to make a total of 8. Then ask the class to say aloud the fact made by the two dominoes. For example, if you draw a two, the child should draw a six, and the class will say together, “2 + 6 = 8.” Write the fact on the board below the drawing. Continue with other facts for 8, then switch to facts for 9.

Today’s Challenge
Using the 1–9 domino cards, construct the 4 by 4 poster shown. Explain that the object of today’s Math Jumble is to make as many addition facts as possible with sums of 8 or 9. Combinations can be made by adding any two adjoining domino cards (top to bottom or left to right) from the poster. Cards on the grid can be used more than once. Record a few of the facts the children make.

Possible facts:

<table>
<thead>
<tr>
<th>Sum of 8</th>
<th>Sum of 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 + 7 = 8</td>
<td>1 + 8 = 9</td>
</tr>
<tr>
<td>2 + 6 = 8</td>
<td>2 + 7 = 9</td>
</tr>
<tr>
<td>3 + 5 = 8</td>
<td>3 + 6 = 9</td>
</tr>
<tr>
<td>4 + 4 = 8</td>
<td>4 + 5 = 9</td>
</tr>
</tbody>
</table>

Student page 104 Have children complete Today’s Challenge on student page 104 to find facts with sums of 8 or 9. Combinations can be made by adding any two adjoining domino cards (top to bottom or left to right). Cards on the can be used more than once.

Possible answers for student page 104:
1. 2.  

<table>
<thead>
<tr>
<th>Sum of 8</th>
<th>Sum of 9</th>
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</thead>
<tbody>
<tr>
<td>1 + 7 = 8</td>
<td>1 + 8 = 9</td>
</tr>
<tr>
<td>2 + 6 = 8</td>
<td>2 + 7 = 9</td>
</tr>
<tr>
<td>3 + 5 = 8</td>
<td>3 + 6 = 9</td>
</tr>
<tr>
<td>4 + 4 = 8</td>
<td>4 + 5 = 9</td>
</tr>
</tbody>
</table>

Go Further
Student page 104 The children complete the pictures to make 8 and 9 and write facts to match the pictures.

Answers for student page 104:
3. draw 5 stars; 3 + 5 = 8
4. draw 5 caps; 4 + 5 = 9

Assessment
Student self-assessment page 104 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children recognize sums of 8 and 9?
Rule Out Two

Week 21 • Activity 105

Materials
Student page 105
Blank paper

Concept
Order the cardinal numbers 20 through 29.

Get Started
Write the numbers 1 through 29 in three rows on the chalkboard duplicating a hundred chart.

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<td>28</td>
<td>29</td>
<td></td>
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</tbody>
</table>

Today’s Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 105 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 105: 1. 22, 23, 24
2. 23, 24, 45

When all children’s papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 105 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children order numbers through 29?
Materials
Student page 106
Red and yellow crayons or markers

Concept
Use two colors to show an AB pattern on a calendar month.

Get Started
Draw a calendar month on the board. Starting with 1, ask children to come to the board one at a time to shade every other number white with chalk for each week. Then ask children the following questions:

- What kind of color pattern do you see? (There are white diagonals.)
- What numbers are left on the other diagonals? Say them. (Even numbers; 2, 4, 6, . . . , 30)

<table>
<thead>
<tr>
<th></th>
<th>Sunday</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>June</strong></td>
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<td></td>
<td></td>
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<td>27</td>
<td>28</td>
<td>29</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Today’s Challenge
Student page 106 Have children complete the activity on the student page.

Answers for student page 106: 1. red, yellow, red, yellow, red, yellow, red, yellow, red, yellow, red, yellow, red, yellow, red, yellow, red, yellow, red, yellow, red, yellow. 2. 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31 are red. 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30 are yellow.

Go Further
Student page 106 Have children complete the activity on the student page.

Answers for student page 106: 3. 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30

Assessment
Student self-assessment page 106 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can students use two colors to show an AB pattern on a calendar month?
Materials
Student page 107
Math Maze cards (Week 22 Activity 107)

Concept
Use algebraic thinking to practice sums through 9.

Get Started
Review sums of 8 and 9 with children. Write the problems below on the board. Have the children say and write the sums.

<table>
<thead>
<tr>
<th>Sums of 8</th>
<th>Sums of 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 + 4 = __</td>
<td>5 + 4 = __</td>
</tr>
<tr>
<td>5 + 3 = __</td>
<td>6 + 3 = __</td>
</tr>
<tr>
<td>6 + 2 = __</td>
<td>7 + 2 = __</td>
</tr>
<tr>
<td>7 + 1 = __</td>
<td>8 + 1 = __</td>
</tr>
<tr>
<td>8 + 0 = __</td>
<td>9 + 0 = __</td>
</tr>
</tbody>
</table>

Use the same set of problems again. This time, erase one or both of the addends so that children can write in the missing numbers.

Children may draw pictures to find the sums or check their answers.

Today's Challenge
Distribute the 18 Math Maze cards for Week 22. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child’s card.

Allow children to write the addition sentence questions on the board instead of reading them.

Note: Same answer boxes mean the same number. For example, $\bullet + \bullet = 4$ means $2 + 2 = 4$, but $\Box + \Box = 4$ means $1 + 3 = 4$. Also, a $\bullet$ does not always represent the number 2; a $\bullet$ could represent the number 3 in the addition sentence $\bullet + 1 = 4$.

The correct sequence of questions and answers is shown on page 200.

Student page 107 When the group has finished playing the game, have children open their books and complete the Today’s Challenge activity on page 107 in the student book.

Answers for student page 107: 1. 7 2. 8 3. 9 4. 8 5. 9 6. 7 7. 9 8. 9 9. 8 10. 8 11. 7 12. 9

Go Further
Student page 107 Have children complete this section on the student page.

Answers for student page 107: 13. 2 14. 4 15. 6 16. 1 17. 0 18. 6

Assessment
Student self-assessment page 107 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children find sums through 9?
Materials
Student page 108
Blank paper

Concept
Review numbers to 40.

Get Started
As a class, pick a number between one and forty. Brainstorm all the things you know about that number. For example 12 is an even number, it is the same as ten plus two more, it is the number of eggs in a dozen, and it the number of people on Melanie’s team.

<table>
<thead>
<tr>
<th>even</th>
<th>number of eggs in a dozen</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>number of people on my team</td>
</tr>
<tr>
<td>ten plus</td>
<td></td>
</tr>
<tr>
<td>2 more</td>
<td></td>
</tr>
</tbody>
</table>

Today’s Challenge
Explain that today the class will be playing a game called “Fantastic Finalist.” Give each child a piece of paper with a number greater than one and less than forty.

You do not have to use all the numbers, but be sure that one child receives the number 25, since that will be the “Fantastic Finalist.”

Have all children hold their numbers and stand in a large circle. Explain that the object of the game is to be the “Fantastic Finalist,” the last child to remain standing.

Read each of the following challenges, one at a time.

• If your number is 2 tens or 3 tens, sit down. (20, 30)

• If your number is more than 2 dimes and 5 pennies, sit down. (26, 27, 28, 29, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40)

• If your number is even, sit down. (2, 4, 6, 8, 10, 12, 14, 16, 18, 22, 24)

• If your number has the digit one in it, sit down. (1, 11, 13, 15, 17, 19, 21)

• If your number is the number of sides on a triangle, sit down. (3)

• If your number is two more than 7 or two less than 7, sit down. (5, 9)

• If your number is 2 + 3 + 2, sit down. (7)

• If your number is between 22 and 24, sit down. (23)

At this point, only the child holding the number 25 should still be standing. That child is the Fantastic Finalist.

Go Further
Student page 108 Have children complete the activity on the student page.

Answers for student page 108: 1. 36 2. Possible answers: greater than 30, less than 40, 3 tens and 6 ones, 3 dozen

Assessment
Student self-assessment page 108 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children recognize numbers to 40?
Materials
Student page 109
Math Jumble activity poster and coin cards

Concepts
Recognize combinations for 8 cents and 9 cents.
Count mixed change.

Get Started
Begin by reviewing how to count coin combinations up to nine cents. For example, ask, “How much is five pennies worth?” (5 cents) “How much is one nickel worth?” (5 cents) “How much is one nickel and one penny worth?” (6 cents) Continue with similar examples until the children are comfortable with adding pennies and a nickel.

Today's Challenge
Using the coin cards, construct the 3 by 3 poster shown. Explain that the object of today’s Math Jumble is to make as many combinations for 8 and 9 cents as possible. Combinations can be made by adding any two adjoining coin cards (top to bottom or left to right) from the poster. Cards can be used more than once. Record the amounts students make. Possible amounts are given.

Possible answers:

<table>
<thead>
<tr>
<th>Sum of 8 cents</th>
<th>Sum of 9 cents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1¢ + 7¢ = 8¢</td>
<td>1¢ + 8¢ = 9¢</td>
</tr>
<tr>
<td>2¢ + 6¢ = 8¢</td>
<td>2¢ + 7¢ = 9¢</td>
</tr>
<tr>
<td>3¢ + 5¢ = 8¢</td>
<td>3¢ + 6¢ = 9¢</td>
</tr>
</tbody>
</table>

Student page 109 Have children complete Today's Challenge on student page 109. Combinations can be made by adding any two adjoining coin cards (top to bottom or left to right) from the poster. Cards can be used more than once.

Answers for student page 109:
1. 2 + 6 = 8
2. 4 + 4 = 8

Go Further
Student page 109 Have children total the cost of the items in their shopping carts and write the facts.

Answers for student page 109: 3. 5¢ + 3¢ = 8¢
4. 4¢ + 5¢ = 9¢

Assessment
Student self-assessment page 109 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children recognize combinations for 8 and 9 and count mixed change?
Materials
Student page 110
Blank paper

Concept
Identify number sentences that do and do not equal 6.

Get Started
Write the equation $4 + 1 = 5$ on the chalkboard. Ask the children to suggest other addition problems that equal 5. List the equations; draw pictures or display concrete objects as a means of checking each equation. Accept equations with more than 2 addends such as $3 + 1 + 1 = 5$. Explore the number 6 in this same manner before proceeding with the student page.

Student page 110 To introduce the activity, work through the first problem on student page 110. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say $(3 + 2 = \Box)$ is wrong because “3 + 2 equals 5 not 6.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why $(4 + 2 = \Box)$ is correct.

Today’s Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 110 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 110: 1. $2 + 2 + 1 = \Box$
2. $2 + 3 = \Box$

When all children’s papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 110 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children identify number sentences and pictures that do and do not equal 6?
**Materials**
Student page 111
Green and yellow crayons or markers

**Concept**
Use two colors to show an AB pattern for numbers 1 through 50 on a hundred chart to aid in counting by twos.

**Get Started**
Draw only the first three rows of a hundred chart on the board. Draw a Smiley Face (лы) above the chart and ask:
- How many eyes does Smiley have? (2) Then circle the 2 in the chart.

Draw another Smiley Face. Ask:
- How many eyes are there in all on both Smiley Faces? (4). Then circle the 4 in the chart.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>12</td>
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<td>25</td>
<td>26</td>
<td>27</td>
<td>28</td>
<td>29</td>
<td>30</td>
</tr>
</tbody>
</table>

2, 4, 6, 8, 10, 12 eyes

Continue in this same manner through 30 until children get the idea that the next number is 2 more than the last number. Then ask:
- What pattern do you see in the chart? (Possible response: The columns with numbers ending in twos, fours, sixes, eights, and zeros have numbers that are circled.)

**Today's Challenge**
Student page 111 Have children complete the activity on the student page.

**Answers for student page 111:** 1. green, yellow, green, yellow, green, yellow, green, yellow, green, yellow, 2. All the odd numbers 1, 3, 5, \ldots, 47, 49 should be colored green. All the even numbers 2, 4, 6, \ldots, 48, 50 should be colored yellow.

**Go Further**
Student page 111 Have children complete the activity on the student page.

**Answers for student page 111:** 3. 10 4. 24 5. 22 6. 36 7. 30 8. 48

**Assessment**
Student self-assessment page 111 Have children circle one of the three choices to describe how they feel about this activity.

**Assessment tip** Can children use two colors to show an AB pattern for numbers 1 through 50 on a hundred chart to aid in counting by twos?
Materials
Student page 112
Math Maze cards (Week 23 Activity 112)

Concept
Reinforce place value in two-digit numbers to 100.

Get Started
Review place value of two-digit numbers with children. Draw pictures or use base-ten blocks to show how two numerals with the same digits can represent two different values depending upon the position of the digits.

```
  3 tens  5 ones
  35

  5 tens  3 ones
  53
```

Today's Challenge
Distribute the 18 Math Maze cards for Week 23. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze
Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, "Who has the card with the answer to the question just read?" Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child's card. Some answers are pictures. In that case, children can describe the picture or draw it on the board.

The correct sequence of questions and answers is shown on page 201.

Student page 112
When the group has finished playing the game, have children open their books and complete the Today's Challenge activity on page 112 in the student book.

Answers for student page 112: 1. 3 tens 7 ones; 37 2. 1 ten 9 ones; 19 3. 7 tens 3 ones; 73 4. 4 tens 8 ones; 48 5. 6 tens 0 ones; 60 6. 8 tens 4 ones; 84

Go Further
Student page 112
Have children complete this section on the student page.

Answers for student page 112: 7. 3 tens and 4 ones 8. 4 tens 9. 4 tens and 3 ones

Assessment
Student self-assessment page 112
Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip
Do children understand place value in two-digit numbers?
Materials
Student page 113
Blank paper (heavyweight if possible) or index cards

Concept
Recognize odd and even.

Get Started
Review odd and even numbers. Demonstrate by having students share strategies for determining odd or even numbers. For example, use a ten frame, look at the ones place, skip count by 2, or think in terms of pairs.

Today's Challenge
Student page 113 Use the chart on page 113 in the student book to play Four-in-a-Row. For each description you read from the list below, there is at least one but sometimes two or more squares that match. Instruct children that they are to make an X on one box for each description. The object of the game is to get four Xs in a row, horizontally, vertically, or diagonally. Read the following instructions.

Mark a box that shows:
- an even number less than 5
- an even number more than 10
- any odd number
- the number of fingers on one hand
- an odd number less than 2
- an even number less than 10
- the number of shoes in a pair
- any even number
- an odd number more than 8
- the number of fingers on two hands
- an odd number less than 8
- an even number more than 8
- any odd number
- an even number less than 10
- any odd number
- any even number

When a child has four in a row, he or she calls out “I have four in a row!” That child should then describe the squares that were marked. If those squares have all been called, that child is the winner.

Go Further
Student page 113 Have children complete the chart in the Go Further section of page 113 in the student book.

Answers for student page 113: 1. odd 2. even 3. odd 4. even

Assessment
Student self-assessment page 113 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children understand odd and even?
Materials
Student page 114
Index cards
Math Jumble activity poster and 1–9 digit cards

Concept
Use mental math to find sums of 8 and 9.

Get Started
Review the facts for 8 and 9 from the previous lessons. Record the facts the children make. Then erase one of the addends in each fact and have volunteers write in the missing numbers. Repeat several times.

\[
\begin{align*}
1 + & = 8 \\
+ 6 & = 8 \\
+ 3 & = 8
\end{align*}
\]

Today's Challenge
Using the 1–9 digit cards, construct the 4 by 4 poster shown. Explain that the object of today’s Math jumble is to make as many addition facts as possible with sums of 8 or 9. Combinations can be made by adding any two adjoining number cards (top to bottom or left to right) from the poster. Cards can be used more than once. Record a few of the facts the children make. Possible facts are given.

<table>
<thead>
<tr>
<th>Possible facts:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum of 8</td>
</tr>
<tr>
<td>1 + 7 = 8</td>
</tr>
<tr>
<td>2 + 6 = 8</td>
</tr>
<tr>
<td>3 + 5 = 8</td>
</tr>
<tr>
<td>4 + 4 = 8</td>
</tr>
</tbody>
</table>

Student page 114 Have children complete Today's Challenge on student page 114 to find and write facts that equal to 8 or 9. Combinations can be made by adding any two adjoining number cards (top to bottom or left to right). Cards can be used more than once.

Answers for student page 114:
1.  
<table>
<thead>
<tr>
<th>Sum of 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 + 7 = 8</td>
</tr>
<tr>
<td>2 + 6 = 8</td>
</tr>
<tr>
<td>3 + 5 = 8</td>
</tr>
<tr>
<td>4 + 4 = 8</td>
</tr>
</tbody>
</table>

2.  
<table>
<thead>
<tr>
<th>Sum of 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 + 8 = 9</td>
</tr>
<tr>
<td>2 + 7 = 9</td>
</tr>
<tr>
<td>3 + 6 = 9</td>
</tr>
<tr>
<td>4 + 5 = 9</td>
</tr>
</tbody>
</table>

Go Further
Student page 114 Children draw pictures to show 8 and 9 and write corresponding facts.

Answers for student page 114: 3. drawing of 8 objects in groups of 2 and 6; 2 + 6 = 8
4. drawing of 9 objects in groups of 4 and 5; 4 + 5 = 9

Assessment
Student self-assessment page 114 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children recognize sums of 8 and 9?
Materials
Student page 115
Blank paper

Concept
Compare lengths to identify shortest and longest.

Get Started
Draw four lines of various lengths on the chalkboard. Ask questions such as: Which line is the shortest? Which line is the longest? Emphasize that in order to make accurate comparisons the lines must be aligned. Have each child draw four lines on a sheet of paper, trade with a partner, and make comparisons. Use various lengths of paper, yarn, or string if available to provide practice in making comparisons.

Student page 115 To introduce the activity, work through the first problem on student page 115. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (rope) is wrong because “that piece of rope is the shortest.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (ruler) is correct.

Today’s Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 115 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 115: 1. balloon
2. paper clip

When all children’s papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 115 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children make comparisons of length to differentiate between the longest and the shortest length?
Materials
Student page 116
Red and yellow crayons or markers

Concept
Use two colors to shown an AB pattern for numbers 51 through 100 on a hundred chart to aid counting by twos.

Background
Students have already used the AB pattern on the hundred chart to count by twos through 50 (Week 23).

Get Started
Draw a 10 $\times$ 10 grid on the board. Write in the numbers 1–40 as on the hundred chart. Call on individual children to write the next rows of numbers. The have individual children circle the twos from 2 through 50. Ask:

- How can you count by twos for numbers greater than 50? (Possible response: follow the same pattern, say every other number, skip over one number.)
- Have children help you to determine the numbers in the next row and write them.

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<td>98</td>
<td>99</td>
<td>100</td>
</tr>
</tbody>
</table>

Today's Challenge
Student page 116 Have children complete the activity on the student page.

Answers for student page 116: 1. All the odd numbers 51, 53, 55, ..., 97, 99 should be colored red. All the even numbers 52, 54, 56, ..., 98, 100 should be colored yellow.

Go Further
Student page 116 Have children complete the activity on the student page.

Answers for student page 116: 1. 60, 62, 64 2. 76, 78, 80 3. 74, 76, 78 5. 92, 94, 96

Assessment
Student self-assessment page 116 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children use two colors to show an AB pattern for numbers 51 through 100 on a hundred chart to show counting by twos?
Materials
Student page 117
Math Maze cards (Week 24 Activity 117)
One crayon or marker

Concept
Identify fractional parts of regions using fractions $\frac{1}{2}$, $\frac{3}{5}$, and $\frac{4}{3}$.

Get Started
Review unit fractions $\frac{1}{2}$, $\frac{1}{3}$, and $\frac{1}{4}$ with children. Draw pictures like these on the board. Pretend the circles are pizzas.

Today's Challenge
Distribute the 18 Math Maze cards for Week 24. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, "Who has the card with the answer to the question just read?" Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child's card. Some answers are pictures. In that case, children can describe the picture or draw it on the board.

The correct sequence of questions and answers is shown on page 202.

Student page 117 When the group has finished playing the game, have children open their books and complete the Today's Challenge activity on page 117 in the student book.

Answers for student page 117: 1. $\frac{1}{3}$ 2. $\frac{1}{2}$ 3. $\frac{1}{4}$ 4. $\frac{1}{4}$ 5. $\frac{1}{3}$ 6. $\frac{1}{2}$

Go Further
Student page 117 Have children complete this section on the student page.

Answers for student page 117:

7. $\frac{1}{4}$ 8. $\frac{1}{3}$ 9. $\frac{1}{2}$

Assessment
Student self-assessment page 117 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children identify a fractional part of a region?
Materials
Student page 118

Concept
Recognize one half.

Get Started
Fractions are part of every day life. Review one half by encouraging children to share their experiences with fractions. For example, children might eat half a cookie or watch half of a football game. Find out how many children you would have if you had only one half of the class.

Today’s Challenge
Student page 118 Use the chart on page 118 in the student book to play Four-in-a-Row. For each description you read from the list below, there is at least one but sometimes two or more squares that match. Instruct children that they are to make an X on one box for each description. The object of the game is to get four Xs in a row, horizontally, vertically, or diagonally.

Note: Before beginning the game, make sure children can read the word half.

Read the following instructions. Mark a box that shows:

- half of 2 is 1
- half of 6 is 3
- half of 10 is 5
- half of 4 is 2
- half of 8 is 4
- half of 6 is 3
- half of 20 is 10
- half of 4 is 2
- half of 2 is 1
- half of 6 is 3

When a child has four in a row, he or she calls out “I have four in a row!” That child should then describe the squares that were marked. If those squares have all been called, that child is the winner.

Go Further
Student page 118 Have children complete the chart in the Go Further section of page 118 in the student book.

Answers for student page 118: 1. 3 2. 4 3. 1 4. 5

Assessment
Student self-assessment page 118 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children understand one half?
Math Jumble

Materials
Student page 119
Math Jumble activity poster and 1–9 domino cards

Concept
Recognize combinations for 9 and 10.

Get Started
Begin by reviewing facts for 9. Call out any number from 0 through 9. Have children show with their fingers how many more are needed to make a total of 9. Choose one child to say aloud the correct answer. Repeat several times for sums of 9, then switch to sums of 10.

Today's Challenge
Using the 1–9 domino cards, construct the 4 by 4 poster shown. Explain that the object of today’s Math Jumble is to make as many addition facts as possible with sums of 9 and 10. Combinations can be made by adding any two adjoining domino cards (top to bottom or left to right) from the poster. Cards on the grid can be used more than once. Record a few of the facts children make.

Possible facts:

<table>
<thead>
<tr>
<th>Sum of 9</th>
<th>Sum of 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 + 8 = 9</td>
<td>1 + 9 = 10</td>
</tr>
<tr>
<td>2 + 7 = 9</td>
<td>2 + 8 = 10</td>
</tr>
<tr>
<td>3 + 6 = 9</td>
<td>3 + 7 = 10</td>
</tr>
<tr>
<td>4 + 5 = 9</td>
<td>4 + 6 = 10</td>
</tr>
<tr>
<td></td>
<td>5 + 5 = 10</td>
</tr>
</tbody>
</table>

Student page 119 Have children use the Today’s Challenge on student page 119 to find pairs of dominoes with sums of 9 and 10. The dominoes should have adjoining sides (top to bottom or left to right). Dominoes can be used more than once. For example, the 6 and the 3 in the first column can be added together to make the sum of 9. The 3 and 7 in the fourth row can be added together to make the sum of 10.

Possible answers for student page 119:
1. Sum of 9
   1 + 8 = 9
2. Sum of 10
   1 + 9 = 10
   2 + 8 = 10
   3 + 7 = 10
   4 + 6 = 10
   5 + 5 = 10

Go Further
Student page 119 Have the children add dots to the ten frames to make 9 and 10, then write corresponding facts.

Answers for student page 119:
3. draw 7 dots; 2 + 7 = 9
4. draw 3 dots; 6 + 3 = 9
5. draw 5 dots; 5 + 5 = 10
6. draw 7 dots; 3 + 7 = 10

Assessment
Student self-assessment page 119 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tips Can children recognize sums of 9 and 10? Can children write addition sentences to match pictures?
Materials
Student page 120
Blank paper

Concept
Identify three-dimensional shapes.

Get Started
Draw and label a ball, a cone, a cube, a can, and a box on the chalkboard. Relate these shapes to items in the classroom environment. Discuss each shape and its distinguishing attributes before proceeding with the student page.

- A ball, cone, and can have roundness to them.
- A cone is round like a circle at one end. A cone has a point on the other end, like some ice cream cones. Ice cream cones that are flat on the bottom (ice cream cups) are not actually cones.
- A can is flat and round like a circle at the top and the bottom. The top and the bottom are the same size. The can may be fat or skinny, tall or short.
- A cube and a box are both like blocks.
- A cube is a box with squares for all the faces, like dice.

Student page 120 To introduce the activity, work through the first problem on student page 120. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can "rule out" some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (cone) is wrong because "that shape is a cone." (If members of the class do not agree with the volunteer's response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (cube) is correct.

Today's Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today's activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 120 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 120: 1. ball 2. box
When all children's papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 120 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children distinguish a cube, a ball, a box, a cone, and a can?
**Pattern Puzzler**

**Week 25 • Activity 121**

**Materials**
Student page 121
Blue, orange, and yellow crayons or markers

**Concept**
Identify even and odd numbers through 100.

**Get Started**
Review even and odd numbers with children. Draw a hundred chart on the board or display on the overhead projector. Ask children to count by twos. Circle each number as they count. After finding all the even numbers on the hundred chart, ask:

- What pattern do you see for the numbers you say when you count by twos? (Possible response: each of them ends with a 2, 4, 6, 8, or 0.)
- What is another name for the twos? (even numbers)
- What are the other numbers called? (odd numbers)
- How can you tell which they are? (Each of them ends with a 1, 3, 5, 7, or 9.)

<p>| | | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>6</td>
<td>7</td>
<td>8</td>
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<tr>
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<td>94</td>
<td>95</td>
<td>96</td>
<td>97</td>
<td>98</td>
<td>99</td>
<td>100</td>
</tr>
</tbody>
</table>

**Today's Challenge**
Student page 121 Have children complete the activity on the student page.

**Answers for student page 121:**
1. All the odd numbers 1, 3, 5, . . . , 97, 99 should be colored red.
2. Answers will vary. Possible response: all the odd numbers end in 1, 3, 5, 7, or 9.

**Go Further**
Student page 121 Have children complete the activity on the student page.

**Answers for student page 121:**
3. The fish with numbers 8, 32, 50, 70, and 94 should be colored orange. The fish with 5, 17, 21, 49, 63, and 85 should be colored yellow. The water in the fish tank should be colored blue.

**Assessment**
Student self-assessment page 121 Have children circle one of the three choices to describe how they feel about this activity.

**Assessment tip** Can children identify even and odd numbers through 100?
Materials
Student page 122
Math Maze cards (Week 25 Activity 122)

Concept
Use algebraic thinking to practice sums and differences related to addition facts through 10.

Get Started
Review sums of 10 with children. Write the addition facts shown below on the board. Have children say and write the sums.

- Sums of 10
  - 5 + 5 = ___
  - 6 + 4 = ___
  - 7 + 3 = ___
  - 8 + 2 = ___
  - 9 + 1 = ___

Use this set of addition problems again. This time, erase on or both of the addends so that children can say and write in the missing numbers.

Review differences related to sums of 10. Write the subtraction sentences below on the board next to the set of addition problems. Have children say and write the differences. The difference is the answer to a subtraction problem. Children may refer to the set of addition problems to help them find the differences.

- Differences
  - 10 - 1 = ___
  - 10 - 2 = ___
  - 10 - 3 = ___
  - 10 - 4 = ___
  - 10 - 5 = ___
  - 10 - 6 = ___
  - 10 - 7 = ___
  - 10 - 8 = ___
  - 10 - 9 = ___

Instructions for playing Math Maze Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child’s card.

Allow children to write the addition and subtraction sentence questions on the board instead of reading them.

Note: Same answer boxes mean the same number. For example, ◊ + ◊ = 4 means 2 + 2 = 4, but ▲ + ▲ = 4 means 1 + 3 = 4. Also, a ◊ does not always represent the number 2; a ◊ could represent the number 3 in the addition sentence ◊ + 1 = 4.

The correct sequence of questions and answers is shown on page 203.

Student page 122 When the group has finished playing the game, have children open their books and complete the Today’s Challenge activity on page 122 in the student book. You may want to suggest that children look for a pattern in the problems.

Answers for student page 122: 1. 10  2. 1  3. 9
  - 1. 10  5. 2  6. 8  7. 10  8. 3  9. 7  10. 10  11. 4
  - 12. 6  13. 10  14. 5  1–14. Consecutive problems belong to the same fact families.

Go Further
Student page 122 Have children complete this section on the student page.

Answers for student page 122: 15. 7 + 3 = 10;
  - 10 – 3 = 7 and 10 – 7 = 3  16. 2 + 8 = 10;
  - 10 – 2 = 8 and 10 – 8 = 2

Assessment
Student self-assessment page 122 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children find sums and differences related to sums through 10?
Materials
Student page 123

Concept
Recognize tens and ones using visual models.

Get Started
Draw the following picture on the board.

```
\[ \begin{array}{c|c}
  & \\
\hline
  & \\
\end{array} \]
```

2 tens and 5 ones
25

Ask:
How many tens are there? (two)
How many ones are there? (five)
What number does the picture represent? (25)

Today's Challenge
Student page 123 Use the chart on page 123 in the student book to play Four-in-a-Row. For each description you read from the list below, there is at least one but sometimes two or more squares that match. Instruct children that they are to make an X on one box for each description. The object of the game is to get four Xs in a row, horizontally, vertically, or diagonally.

Note: Before beginning the game, make sure children can read the words tens and ones.

Read the following instructions. Mark a box that shows:

```
12 28
31 55
39 39
50 49
49 28
55 31
64 64
12 50
```

When a child has four in a row, he or she calls out “I have four in a row!” That child should then describe the squares that were marked. If those squares have all been called, that child is the winner.

Go Further
Student page 123 Have children complete the chart in the Go Further section of page 123 in the student book.

Answers for student page 123: 1. 3 tens and 1 one
2. 5 tens and 5 ones
3. 6 tens and 4 ones
4. 2 tens and 8 ones

Assessment
Student self-assessment page 123 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children recognize tens and ones using a visual model?
Materials
Student page 124
Math Jumble activity poster and coin cards

Concept
Recognize coin combinations for 9 cents and 10 cents.

Get Started
Begin by reviewing how to count coin combinations up to ten cents. For example, ask, “How much is five pennies worth?” (5 cents) “How much is one nickel worth?” (5 cents) “How much is two nickels worth?” (10 cents) “How much is one nickel and one penny worth?” (6 cents) Continue with similar examples until the children are comfortable with adding pennies and nickels.

Today’s Challenge
Using the penny and nickel coin cards, construct the 3 by 3 poster shown. Explain that the object of today’s Math Jumble is to find combinations for 9 and 10 cents. Combinations can be made by adding any adjoining coin cards (top to bottom or left to right) from the poster. Cards can be used more than once. Record the amounts the children make. Possible facts are given.

Possible Answers:

<table>
<thead>
<tr>
<th>Sum of 9¢</th>
<th>Sum of 10¢</th>
</tr>
</thead>
<tbody>
<tr>
<td>1¢ + 8¢ = 9¢</td>
<td>2¢ + 8¢ = 10¢</td>
</tr>
<tr>
<td>3¢ + 6¢ = 9¢</td>
<td>3¢ + 7¢ = 10¢</td>
</tr>
<tr>
<td>4¢ + 5¢ = 9¢</td>
<td>4¢ + 6¢ = 10¢</td>
</tr>
<tr>
<td></td>
<td>5¢ + 5¢ = 10¢</td>
</tr>
</tbody>
</table>

Student page 124 Have children complete Today’s Challenge on student page 124 to find sums of 9 cents and 10 cents. Combinations can be made by adding any adjoining coin cards (top to bottom or left to right). Cards can be used more than once.

Answers for student page 124:
1. 2.

<table>
<thead>
<tr>
<th>Sum of 9¢</th>
<th>Sum of 10¢</th>
</tr>
</thead>
<tbody>
<tr>
<td>1¢ + 8¢ = 9¢</td>
<td>2¢ + 8¢ = 10¢</td>
</tr>
<tr>
<td>3¢ + 6¢ = 9¢</td>
<td>3¢ + 7¢ = 10¢</td>
</tr>
<tr>
<td>4¢ + 5¢ = 9¢</td>
<td>4¢ + 6¢ = 10¢</td>
</tr>
<tr>
<td></td>
<td>5¢ + 5¢ = 10¢</td>
</tr>
</tbody>
</table>

Go Further
Student page 124 Children write in the missing amounts on student page 124.

Answers for student page 124: 3. 4 4. 9 5. 7 6. 10 7. 6 8. 9

Assessment
Student self-assessment page 124 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children recognize coin combinations for 9 cents and 10 cents?
Rule Out Two

Week 25 • Activity 125

Materials
Student page 125
Hundred chart (inside back cover of student book)
Dimes
Blank paper

Concept
Skip count by tens.

Get Started
Write the multiples of 10 through 100 on the chalkboard vertically and horizontally. Count play or real dimes to provide a real-life connection to the activity. Practice counting by 10 with the children. Select children to answer such questions as: What ten comes before 30? What ten comes after 30? Continue this line of questioning with other numbers before proceeding with the student page.

Student page 125 To introduce the activity, work through the first problem on student page 125. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (31, 32) is wrong because “31 and 32 is counting by ones.” (If members of the class do not agree with the volunteer's response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (40, 50) is correct.

Today's Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today's activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 125 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 125: 1. 70, 80  2. 20, 10
When all children's papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 125 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children complete a pattern of skip counting by ten?
Materials
Student page 126

Concept
Recognize the ones place number pattern for numbers 1 through 50.

Get Started
Write the numbers 1–10 and 1–20 on the chalkboard in vertical columns. Ask children these questions:
- What is different about these two columns of numbers? (Possible response: there are no tens in the first nine numbers in the first column.)
- What is the same about these two columns of numbers? (The numbers in each column end with 1, 2, 3, 4, 5, 6, 7, 8, 9, and 0.)

Write the numbers 21–30 on the board in a vertical column leaving a blank for the last digit.
- How can you finish the next column? (Follow the same counting pattern for the ones. Write 4, 5, 6, 7, 8, an 9 in the remaining blanks.)

1 11 21
2 12 22
3 13 23
4 14 __
5 15 __
6 16 __
7 17 __
8 18 __
9 19 __
10 20 30

Today's Challenge
Student page 126 Have children complete the activity on the student page.

Answers for student page 126: 1, 11, 12, 13, 14, 15, 16, 17, 21, 22, 23, 24, 25, 26, 27, 3, 34, 35, 36, 37, 38, 39, 40, 44, 45, 46, 47, 48, 49, 50

Go Further
Student page 126 Have children complete the activity on the student page.

Answers for student page 126: 5, 35, 36, 37, 38, 39, 40, 41, 42

Assessment
Student self-assessment page 126 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children recognize the ones number pattern for numbers 1 through 50?
Materials
Student page 127
Math Maze cards (Week 26 Activity 127)

Concept
Identify appropriate measurement tools and compare measurements.

Get Started
Show actual tools or show or draw pictures of various measurement tools. Ask children whether they have used any of the tools and if so, how the tools were used.

Today’s Challenge
Distribute the 18 Math Maze cards for Week 26. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child’s card. Since some of the questions and answers are pictures, children can describe the picture.

The correct sequence of questions and answers is shown on page 204.

Student page 127 When the group has finished playing the game, have children open their books and complete the Today’s Challenge activity on page 127 in the student book.

Answers for student page 127:

1.  
2.  
3.  
4.  

Go Further
Student page 127 Have children complete this section on the student page.

Answers for student page 127: Answers will vary. An object lighter than a chair might be a cup or a book. An object heavier than a chair might be an adult person or a car.

Assessment
Student self-assessment page 127 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children choose the appropriate tool to measure a quantity and can they compare measurements?
Materials
Student page 128

Concept
Count mixed coins.

Get Started
Review the value of a penny, nickel, and dime.

1 cent 5 cents 10 cents

Encourage children to mix the coins together to get different values.

Use examples like those in the table below to demonstrate.

<table>
<thead>
<tr>
<th>6 cents</th>
<th>11 cents</th>
</tr>
</thead>
<tbody>
<tr>
<td>one nickel and one penny</td>
<td>one dime and one penny</td>
</tr>
</tbody>
</table>

Read the following instructions. Mark a box that shows:

11 cents 15 cents
9 cents 10 cents
15 cents 16 cents
13 cents 11 cents
16 cents 14 cents
12 cents 10 cents
11 cents 9 cents
14 cents 8 cents

When a child has four in a row, he or she calls out “I have four in a row!” That child should then describe the squares that were marked. If those squares have all been called, that child is the winner.

Go Further
Have children complete the chart in the Go Further section of page 118 in the student book.


Go over answers with the whole group or check children’s papers individually.

Assessment
Student self-assessment page 128 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Are children able to count mixed coins using pennies, nickels, and dimes?
Materials
Student page
Math Jumble activity poster and 0–9 digit cards

Concept
Recognize combinations for 9 and 10.

Get Started
Begin by reviewing facts for 9. Call out any number from 0 through 9. Have children show with their fingers how many more are needed to make a total of 9. Choose one child to say aloud the correct answer. Repeat several times for sums of 9, then switch to sums of 10.

Today’s Challenge
Using the 0–9 digit cards, construct the 4 by 4 poster shown. Explain that the object of today’s Math Jumble is to make as many addition facts as possible with sums of 9 and 10. Facts can be made by adding any two adjoining numbers (top to bottom or left to right) from the poster. Numbers on the poster can be used more than once, but the sums must be 9 or 10. Record a few of the facts students make.

Possible facts:

<table>
<thead>
<tr>
<th>Sum of 9</th>
<th>Sum of 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 + 9 = 9</td>
<td>1 + 9 = 10</td>
</tr>
<tr>
<td>1 + 8 = 9</td>
<td>2 + 8 = 10</td>
</tr>
<tr>
<td>2 + 7 = 9</td>
<td>3 + 7 = 10</td>
</tr>
<tr>
<td>3 + 6 = 9</td>
<td>4 + 6 = 10</td>
</tr>
<tr>
<td>4 + 5 = 9</td>
<td>5 + 5 = 10</td>
</tr>
</tbody>
</table>

Student page 129 Have students complete Today’s Challenge on student page 129. Facts can be made by adding any two adjoining numbers (top to bottom or left to right). Numbers in the grid can be used more than once.

Possible answers for student page 129:
1. 2.

<table>
<thead>
<tr>
<th>Sum of 9</th>
<th>Sum of 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 + 9 = 9</td>
<td>1 + 9 = 10</td>
</tr>
<tr>
<td>1 + 8 = 9</td>
<td>2 + 8 = 10</td>
</tr>
<tr>
<td>2 + 7 = 9</td>
<td>3 + 7 = 10</td>
</tr>
<tr>
<td>3 + 6 = 9</td>
<td>4 + 6 = 10</td>
</tr>
<tr>
<td>4 + 5 = 9</td>
<td>5 + 5 = 10</td>
</tr>
</tbody>
</table>

Go Further
Student page 129 Have the children complete the ten frames to make 9 and 10 and write equations to match.

Answers for student page 129:
3. draw 4 stars; $5 + 4 = 9$
4. draw 2 stars; $7 + 2 = 9$
5. draw 8 stars; $2 + 8 = 10$
6. draw 3 stars; $7 + 3 = 10$

Assessment
Student self-assessment page 129 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tips Can children recognize sums for 9 and 10? Can children find the missing addend for sums of 9 and 10?
Materials
Student page 130
Blank paper

Concept
Identify sums for 7.

Get Started
Write the equation $4 + 2 = 6$ on the chalkboard. Ask the children to suggest other addition problems that equal 6. List the equations; draw picture representations or display concrete objects as a means of checking each equation. Accept equations with more that 2 addends such as $3 + 2 + 1 = 6$. Explore the number 7 in this same manner before proceeding with the student page.

Student page 130 To introduce the activity, work through the first problem on student page 130. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say $(3 + 5 = 8)$ is wrong because “3 + 5 equals 8.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why $(4 + 3 = 8)$ is correct.

Today’s Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 130 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 130: 1. $2 + 2 + 2 = \underline{8}$
2. $4 + 2 = \underline{8}$

When all children’s papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 130 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children identify sums for 7?
Materials
Student page 131
Red and yellow crayons or markers

Concept
Use two colors to show an AAAAB pattern on a calendar month.

Background
Children have already shown patterns on a calendar month (Week 22).

Get Started
Draw a calendar month on the board. Starting with 1, have children shade different patterns on the calendar month such as AAB or AAAAB. Then ask children what kind of color pattern do you see? (Possible response: Every third (fourth) number is shaded.) Then have children shade an AAAAB pattern on the calendar month.

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Today's Challenge
Student page 131 Have children complete the activity on the student page.

Answers for student page 131: 1. red, red, red, red, yellow, red, red, red, red, red, red, red, red, red, red, red, red, red, red, red
2. The numbers 5, 10, 15, 20, 25, and 30 should be colored yellow. All the other numbers should be colored red.

Go Further
Student page 131 Have children complete the activity on the student page.

Answers for student page 131: 3. 5, 10, 15, 20, 25, 30 4. Each number ends in 0 or 5, or each number is 5 more than the previous number.

Assessment
Student self-assessment page 131 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children use two colors to show an AAAAB pattern on a calendar month?
Materials
Student page 132
Math Maze cards (Week 27 Activity 132)

Concept
Identify two-dimensional shapes and three-dimensional solids.

Get Started
Review with children the name and attributes of each two-dimensional shape.

- square
  - 4 sides
  - 4 corners
- rectangle
  - 4 sides
  - 4 corners
- triangle
  - 3 sides
  - 3 corners
- circle
  - 0 sides
  - 0 corners
  - It is round.
- hexagon
  - 6 sides
  - 6 corners

Review with children the name and attributes of each three-dimensional solid.

- 6 square faces
- 6 faces
- 2 round faces
- edge
cube
- edge
box
- 2 curved edges
  - can

- 1 round face
- 1 curved edge
  - cone
- ball

Ask children to look around the room for objects that look like the shapes and solids above.

Today’s Challenge
Distribute the 18 Math Maze cards for Week 27. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze
Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child’s card. Some answers are pictures. In that case, children can describe the picture or draw it on the board.

The correct sequence of questions and answers is shown on page 205.

Student page 132
When the group has finished playing the game, have children open their books and complete the Today’s Challenge activity on page 132 in the student book.


Go Further
Student page 132
Have children complete this section on the student page.

Answers for student page 132: 10. Answers will vary.

Assessment
Student self-assessment page 132
Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip
Can children identify two-dimensional shapes and three-dimensional solids, and real-life objects containing them?
Materials
Student page 133

Concept
Estimate length in inches.

Get Started
Student page 133 Using the ruler on the student page, have children measure about how many inches long their hand is. Model this for the children. Explain that they are to find items in the room to measure using their hand such as pencils, books, or body parts. The items should not be more than three hands long.

3. Is your item longer than an inch? If yes, score 1 point.
4. Is your item about three inches? If yes, score 4 points.
5. Is your item about an inch? If yes, score 2 points.

Have children find their total scores. Top scorer(s) should have the stick of gum. Ask a volunteer to name his or her item and explain the score.

Go Further
Student page 133 Have children find two small items in the classroom to measure. Items need to be shorter than the length of the ruler on the page. Have children choose the item, estimate the length in inches, and then measure in inches using the ruler at the top of the student page.

Answers for student page 133: Answers will vary. Check children’s work to see if answers are appropriate.

Assessment
Student page 133 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children estimate length in inches?
Materials
Student page 134
Math Jumble activity poster and 2–9 digit cards

Concept
Recognize addition facts for 11.

Get Started
Begin by brainstorming addition facts for 11. Write down the answers given by the children. Then erase one of the addends in each fact and have volunteers write in the missing numbers. Repeat several times.

\[ 2 + \_ = 11 \]
\[ + 6 = 11 \]
\[ + 3 = 11 \]

Today's Challenge
Using the 2–9 digit cards construct the 4 by 3 poster shown. Explain that the object of today's Math Jumble is to make as many addition facts as possible equal to 11. Facts can be made by adding any two adjoining numbers (top to bottom or left to right) from the poster. Numbers on the poster can be used more than once. Record a few of the facts the children make.

Possible answers:
\[ 2 + 9 = 11 \]
\[ 3 + 8 = 11 \]
\[ 4 + 7 = 11 \]
\[ 5 + 6 = 11 \]

Student page 134 Have children complete Today's Challenge on student page 134 to find pairs that equal eleven. Facts can be made by adding any two adjoining numbers (top to bottom or left to right). Children circle the combinations and write the facts.

Answers for student page 134:

\[ \begin{array}{ccc}
3 & 8 & 4 \\
9 & 5 & 6 \\
2 & 9 & 8 \\
\end{array} \]

Sum of 11
\[ 2 + 9 = 11 \]
\[ 3 + 8 = 11 \]
\[ 4 + 7 = 11 \]
\[ 5 + 6 = 11 \]

Go Further
Student page 134 Have each child use the blank grid on student page 134 and numbers 2–9 to create their own Math Jumble. Children then share their Math Jumble with a friend. The friend finds facts for 11 and signs his or her name.

Answers for student page 134: Answers will vary. Check children’s work.

Assessment
Student self-assessment page 134 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children recognize facts for eleven?
Materials
Student page 135
Blank paper
Demonstration clock

Concept
Tell time to the whole hour.

Get Started
Draw a clock face on the chalkboard or display a demonstration clock, if available. Explain the functions of the hands on the clock. Draw or display time to the whole hour on the clock to provide the children practice in telling time.

Student page 135 To introduce the activity, work through the first problem on student page 135. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (12:00) is wrong because “both hands would be pointing straight up at the 12 if it were 12:00.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (5:00) is correct.

Today’s Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 135 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 135: 1. 10:00 2. 6:00
When all children’s papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 135 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children tell time to the whole hour?
Materials
Student page 136
Blue and yellow crayons or markers

Concept
Use two colors to show an AAAAB pattern for numbers 1 through 50 on a hundred chart to aid in counting by fives.

Background
Children have already shown an AAAAB pattern on a calendar month (Week 27) and AB patterns on a hundred chart (Weeks 23, 24).

Get Started
Draw only the first three rows of a hundred chart on the board.

Draw a hand above the chart and ask:
• How many fingers are in one hand? (5) Then circle the 5 in the chart.

Draw another hand and ask:
• How many fingers are there in all on both hands? (10). Then circle the 10 in the chart.

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Continue in this same manner through 30 until children get the idea that each number is “5 more” than the last number. Then ask:
• What pattern do you see in the chart? (The columns with numbers ending in fives and zeros have numbers that are circled.)
• What does that tell you about counting by fives? (When you count by fives starting with 5, the numbers end with 5 or 0.)
• Counting by fives, what number comes after 10 (15) after 20? (25) after 25? (30)

Today’s Challenge
Student page 136 Have children complete the activity on the student page.

Answers for student page 136: 1. blue, blue, blue, blue, yellow, blue, blue, blue, blue, blue 2. All the fives (5, 10, 15, ..., 50) should be colored yellow. All the other numbers should be colored blue.

Go Further
Student page 136 Have children complete the activity on the student page.

Answers for student page 136: 3. 20 4. 35 5. 50 6. 25 7. 40 8. 30

Assessment
Student self-assessment page 136 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children use two colors to show an AAAAB pattern for numbers 1 through 50 on a hundred chart to aid in counting by fives?
Materials
Student page 137
Math Maze cards (Week 28 Activity 137)

Concept
Use algebraic thinking to practice sums and differences related to sums of 11.

Get Started
Review sums of 11 with children. Write the addition facts shown below on the board. Look at the fact $6 + 5 = 11$. The addition fact $5 + 5 = 10$ can help children see that $6 + 5$ is 1 more than 10, or 11. Have children say and write the sums. When children have difficulty with sums of 11, remind them of the sums of 10 facts.

Sums of 11
6 + 5 = ___
7 + 4 = ___
8 + 3 = ___
9 + 2 = ___

Use the set of addition problems again. This time, erase one or both of the addends so that children can say and write in the missing numbers.

Review differences related to sums of 11. Write the subtraction facts on the board. Have children say and write the differences. Point out how the subtraction facts are related to the addition facts. For example, if $6 + 5 = 11$, then $11 - 5 = 6$ and $11 - 6 = 5$.

Differences
11 - 1 = ___
11 - 2 = ___
11 - 3 = ___
11 - 4 = ___
11 - 5 = ___
11 - 6 = ___
11 - 7 = ___
11 - 8 = ___
11 - 9 = ___
11 - 10 = ___
11 - 11 = ___

cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, "Who has the card with the answer to the question just read?" Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child's card. Allow children to write the addition and subtraction sentence questions on the board instead of reading them.

Note: Same answer boxes mean the same number. For example, ♦ + ♦ = 4 means 2 + 2 = 4, but △ + ♦ = 4 means 1 + 3 = 4. Also, a ♦ does not always represent the number 2; a ♦ could represent the number 3 in the addition sentence ♦ + 1 = 4.

The correct sequence of questions and answers is shown on page 206.

Student page 137 When the group has finished playing the game, have children open their books and complete the Today's Challenge activity on page 137 in the student book.

Answers for student page 137: 1. 11  2. 2  3. 6
4. 11 5. 3  6. 7  7. 11  8. 4  9. 8  10. 11  11. 5  12. 9

Go Further
Student page 137 Have children complete this section on the student page.

Answers for student page 137: 13. 5 + 5 = 10;
14. 6 + 5 = 11; 11 - 5 = 6;
11 - 6 = 5

Assessment
Student self-assessment page 137 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children find sums and differences related to sums of 11?
Materials
Student page 138

Concept
Recognize tens and ones.

Get Started
Draw the following picture on the board.

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three tens and four ones
34

Ask children: How many tens are there? (3) How many ones are there? (4) What number does the picture represent? (34)

Today's Challenge
Student page 138 Use the chart on page 138 in the student book to play Four-in-a-Row. For each description you read from the list below, there is at least one but sometimes two or more squares that match. Instruct children that they are to make an X one box for each description read. The object of the game is to get four Xs in a row, horizontally, vertically, or diagonally.

Read the following instructions. Mark a box that shows:

21  46
5 tens and 5 ones  86
6 tens and 4 ones  3 tens and 2 ones
3 tens  12
46  21
86  3 tens and 2 ones
5 tens and 5 ones  6 tens and 4 ones
3 tens  12

When a child has four in a row, he or she calls out "I have four in a row!" That child should then describe the squares that were marked. If those squares have all been called, that child is the winner.

Go Further
Have children complete the chart in the Go Further section of page 138 in the student book.

Answers for student page 138: 1. 32  2. 55  3. 64
4. 30

Go over answers with the whole group or check children's papers individually.

Assessment
Student self-assessment page 138 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children recognize tens and ones?
**Math Jumble**

**Week 28•Activity 139**

**Materials**
Student page 139  
Math Jumble activity poster and coin cards

**Concepts**
Recognize combinations for 11 cents.  
Count mixed change.

**Get Started**
Begin by reviewing how to count coin combinations up to 11 cents. For example, ask, “How much is five pennies worth?” (5 cents) “How much is one nickel worth?” (5 cents) “How much is one nickel and one penny worth?” (6 cents) Continue with similar examples until the children are comfortable with adding pennies, nickels, and dimes.

**Today’s Challenge**
Using the penny, nickel, and dime coin cards, construct the 4 by 3 poster shown. Explain that the object of today’s Math Jumble is to make as many combinations for 11 cents as possible. Combinations can be made by adding any two adjoining numbers (top to bottom or left to right) from the poster. Record a few of the amounts students make.

**Possible amounts:**
- \(1\)¢ + \(10\)¢ = \(11\)¢  
- \(2\)¢ + \(9\)¢ = \(11\)¢  
- \(3\)¢ + \(8\)¢ = \(11\)¢  
- \(4\)¢ + \(7\)¢ = \(11\)¢  
- \(5\)¢ + \(6\)¢ = \(11\)¢

**Student page 139** Have children complete Today’s Challenge on student page 139. Children loop pairs of coin cards that equal \(11\)¢ and then write the facts that are shown by the coin cards. Combinations can be made by adding any two adjoining numbers (top to bottom or left to right).

**Answers for student page 139:**
1. \(1\)¢ + \(10\)¢ = \(11\)¢  
2. \(2\)¢ + \(9\)¢ = \(11\)¢  
3. \(3\)¢ + \(8\)¢ = \(11\)¢  
4. \(4\)¢ + \(7\)¢ = \(11\)¢  
5. \(5\)¢ + \(6\)¢ = \(11\)¢

**Go Further**
**Student page 139** Have children total the cost of the items pictured and write the facts.

**Answers for student page 139:**
2. \(9\)¢ + \(2\)¢ = \(11\)¢  
3. \(4\)¢ + \(7\)¢ = \(11\)¢

**Assessment**
**Student self-assessment page 139** Have children circle one of the three choices to describe how they feel about this activity.

**Assessment tip** Can children count mixed change?
**Materials**  
Student page 140  
Blank paper

**Concept**  
Identify three-dimensional shapes.

**Get Started**  
Draw and label a ball, a cone, a cube, a can, and a box on the chalkboard. Relate these shapes to items in the classroom environment. Discuss each shape and its distinguishing attributes before proceeding with the student page.

- A ball, cone, and can have roundness to them:  
- A cone is round like a circle at one end. A cone has a point on the other end, like some ice cream cones. Ice cream cones that are flat on the bottom (ice cream cups) are not actually cones.  
- A can is flat and round like a circle at the top and the bottom. The top and the bottom are the same size. The can may be fat or skinny, tall or short.  
- A cube and a box are like boxes or blocks.  
- A cube is a box with squares for all the faces, like dice.

**Student page 140** To introduce the activity, work through the first problem on student page 140. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (cone) is wrong because “that shape is a cone.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (can) is correct.

**Today’s Challenge**  
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score. Explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

**Student page 140** Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

**Answers for student page 140:** 1. cone 2. ball

When all children’s papers have been scored, determine the high scorer(s) for the day.

**Go Further**  
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

**Assessment**  
**Student self-assessment page 140** Have children circle one of the three choices to describe how they feel about this activity.

**Assessment tip** Can the children distinguish a cube, a ball, a box, a cone, and a can?
**Pattern Puzzler**

**Week 29 • Activity 141**

### Materials
Student page 141
Blue and yellow crayons or markers

### Concept
Use two colors to show an AAAAB pattern on the hundred chart to aid counting by fives to 100.

### Background
Children have already used an AAAAB pattern on the hundred chart to count by fives through 50 (Week 28).

### Get Started
Draw a $10 \times 10$ grid on the board. Call on individual children to each write one row of numbers on the hundred chart. Then have individual children circle the fives from 5 through 50. Ask:
- How can you count by fives for numbers greater than 50? (Follow the same pattern.)

### Today's Challenge
**Student page 141** Have children complete the activity on the student page.

**Answers for student page 141:**
1. All the fives (5, 10, 15, \ldots, 95, 100) should be colored yellow. All the other numbers should be colored blue.

### Go Further
**Student page 141** Have children complete the activity on the student page.

**Answers for student page 141:**
2. 55, 60, 65
3. 85, 90, 95
4. 90, 95, 100
5. 65, 70, 75

### Assessment
**Student self-assessment page 141** Have children circle one of the three choices to describe how they feel about this activity.

**Assessment tip** Can children use two colors to show an AAAAB pattern on the hundred chart to aid counting by fives to 100?

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Materials
Student page 142
Math Maze cards (Week 29 Activity 142)

Concept
Use algebraic thinking to practice sums and differences related to sums through 12.

Get Started
Review sums of 12 with children. Write the addition facts shown below on the board. Have them say and write the sums.

Sums of 12
6 + 6 = ___
7 + 5 = ___
8 + 4 = ___
9 + 3 = ___

Review sums that are doubles of numbers. Write these facts on the board. Discuss them and have children find the sums.

Doubles
1 + 1 = ___
2 + 2 = ___
3 + 3 = ___
4 + 4 = ___

Review sums that are triples of numbers. Write these on the board. Discuss them and have children find the sums.

Triples
1 + 1 + 1 = ___
2 + 2 + 2 = ___
3 + 3 + 3 = ___
4 + 4 + 4 = ___

Review differences related to sums of 12. Write the subtraction facts shown below on the board. Have children say and write the differences.

Differences
12 - 2 = ___
12 - 3 = ___
12 - 4 = ___
12 - 5 = ___
12 - 6 = ___
12 - 7 = ___
12 - 8 = ___
12 - 9 = ___
12 - 10 = ___

Today's Challenge
Distribute the 18 Math Maze cards for Week 29. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, "Who has the card with the answer to the question just read?" Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child's card. Allow children to write the addition and subtraction sentence questions on the board instead of reading them.

Note: Same answer boxes mean the same number. For example, ⌂ + ⌂ = 4 means 2 + 2 = 4, but □ + □ = 4 means 1 + 3 = 4. Also, a ⌂ does not always represent the number 2; a ⌂ could represent the number 3 in the addition sentence ⌂ + 1 = 4.

The correct sequence of questions and answers is shown on page 206.

Student page 142 When the group has finished playing the game, have children open their books and complete the Today's Challenge activity on page 142 in the student book.

Answers for student page 142: 1. First column: 7, 5, 5, 2, 7 second column: 7, 9, 12, 8, 11 third column 7, 4, 3, 2, 5 matches: 5 + 2: 7 - 2, 7 - 5; 2 + 7: 9 - 7, 9 - 2; 7 + 5: 12 - 5, 12 - 7; 3 + 5: 8 - 3, 8 - 5; 4 + 7: 11 - 4, 11 - 7

Go Further
Student page 142 Have children complete this section on the student page.

Answers for student page 142: 2. Using only one-digit numbers: 2 + 2 + 8 = 12; 3 + 3 + 6 = 12; 5 + 5 + 2 = 12, 6 + 6 + 0 = 12. Using a two-digit number, these are possible: 1 + 1 + 10 = 12; 0 + 0 + 12 = 12.

Assessment
Student self-assessment page 142 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children find sums and differences related to sums through 12?
Materials
Student page 143

Concept
Select appropriate tools for measuring.

Get Started
Explain to children that there are many tools for measuring length, time, and temperature.

Draw the different tools on the board and write their names.

Clock  Ruler  Calendar  Thermometer

Have children share their own experiences with measuring. Ask:
• When would you use a thermometer to measure?
• When would you use a clock?
• When would you use a calendar?
• When would you use a ruler to measure?

Today's Challenge
Student page 143 Explain that today you will be playing a game called “Who Wants to be the Top Scorer?” Have children ring a measurement tool they would like to use to play the game. As you ask each of five questions, have children look at the tool they have selected and answer the question. Yes answers will score a point.

As you ask each of five questions, have children look at their tool and answer the question. If their answer is yes, then they will make a checkmark. Yes answers will score a point. Here are the questions to ask:
1. Does your measurement tool tell you what day tomorrow will be? If yes, make a checkmark.
2. Does your measurement tool help you know how cold it is outside? If yes, make a checkmark.
3. Does your measurement tool help you know what time to go to school? If yes, make a checkmark.
4. Does your measurement tool help you find out how long your foot is? If yes, make a checkmark.
5. Does your measurement tool help you know whether you are running a fever? If yes, make a checkmark.

Top scorer(s) will have a thermometer.

Have children find their total scores by counting their checks. Ask a volunteer to name his or her tool and explain the score.

Go Further
Student page 143 Have children answer questions on student page 143.

Answers for student page 143: Answers will vary. The weather will be warm.

Assessment
Student self-evaluation page 143 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Are children able to identify the appropriate tool for measuring?
**Materials**
Student page 144
Math Jumble activity poster and 1–9 digit cards

**Concept**
Recognize facts for 12.

**Get Started**
Begin by brainstorming addition facts with sums for 12. Write down the answers given by the children.

Begin by brainstorming addition facts with sums of 12. Write down the answers given by the children. Call out any number from 2 through 12. Have children show with their fingers how many more are needed to make a total of 12. Choose one child to say aloud the correct answer. Repeat several times.

**Today's Challenge**
Using the 1–9 digit cards construct the 4 by 4 poster shown. Explain that the object of today's Math Jumble is to make as many addition facts as possible equal to 12. Combinations can be made by adding any two adjoining numbers (top to bottom or left to right) from the poster. Record a few of the facts the children make.

**Possible facts:**
- $3 + 9 = 12$
- $4 + 8 = 12$
- $5 + 7 = 12$
- $6 + 6 = 12$

**Student page 144** Have students complete Today's Challenge on student page 144 to find facts for twelve. Combinations can be made by adding any two adjoining numbers (top to bottom or left to right). Children loop the combinations and write the facts.

**Possible answers for student page 144:**

```

3 9 4 8
5 7 6 6
8 4 9 2
7 5 3 1
```

- $3 + 9 = 12$
- $4 + 8 = 12$
- $5 + 7 = 12$
- $6 + 6 = 12$

**Go Further**

**Student page 144** Have each child use the blank grid on student page 144 and numbers 3–9 to create their own Math Jumble. Children then share their Math Jumble with a friend. The friend finds facts for 12 and signs their name.

**Answers for student page 144:** Answers will vary. Check children's work.

**Assessment**

**Student self-assessment page 144** Have the children circle one of the three choices to describe how they feel about this activity.

**Assessment tip** Can students recognize sums for twelve?
Materials
Student page 145
Blank paper

Concept
Skip count by fives to 50.

Get Started
Write the multiples of five through 50 on the chalkboard vertically and horizontally. Focus the children’s attention on the patterns that are created. Highlight the position of the multiples of 5 on a hundreds chart if available. Count play or real nickels to provide a real-life connection to the activity. Practice counting by fives beginning with different numbers. Select children to answer such questions as: When counting by fives, what number comes after 30? (35) What number comes before 30? (25) Continue this line of questioning with other numbers before proceeding with the student page.

Student page 145 To introduce the activity, work through the first problem on student page 145. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask for a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (41, 42) is wrong because “41 and 42 is counting by ones.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (45, 50) is correct.

Today’s Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 145 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 145: 1. 90, 95 2. 60, 65

When all children’s papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 145 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children continue a pattern of skip counting by five?
Materials
Student page 146
Red and yellow crayons or markers

Concept
Count by fives for numbers 1 through 100.

Background
Children have already used patterns to count by fives on a hundred chart (Weeks 28, 29).

Get Started
Review counting by fives with children. Draw a hundred chart on the board or display one on the overhead projector. Ask children to count by fives. Circle each number as they say each number. After finding all the fives on the chart, ask:
• What pattern do you see for the fives? (Each of them ends with a 5 or 0.)

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Today's Challenge
Student page 146 Have children complete the activity on the student page.

Answers for student page 146: 1. All the fives (5, 10, 15, ..., 95, 100) should be colored yellow.
2. Possible answer: each five ends with a 5 or 0.

Go Further
Student page 146 Have children complete the activity on the student page. You might have children count by twos aloud before completing this task. Tell children that they will be coloring red all the numbers they say aloud.

Answers for student page 146: 3. All the twos, or even numbers, should be colored red. 4. 10, 20, 30, 40, 50, 60, 70, 80, 90, 100

Assessment
Student self-assessment page 146 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children count by fives for numbers 1 through 100?
Materials
Student page 147
Math Maze cards (Week 30 Activity 147)

Concept
Tell time to the hour and half hour.

Get Started
Review telling time to the hour and half hour with children.

An hour has 60 minutes

A half hour has 30 minutes.

10:00

10:30

10 o'clock
ten thirty half past 10
30 minutes past 10

Draw a large clock face on the board. Draw pairs of hands on the clock face for children to practice telling time. Also, write a time on the board and then have children draw the pair of hands on the clock face.

Today's Challenge
Distribute the 18 Math Maze cards for Week 30. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child's card. Some answers are pictures. In that case, children can describe the picture or draw it on the board.

Note: When the question asks for the time, the answer card will be represented digitally. When the question asks for a clock, the answer card will show the time on a clock face.

The correct sequence of questions and answers is shown on page 207.

Student page 147 When the group has finished playing the game, have children open their books and complete the Today's Challenge activity on page 147 in the student book.

Answers for student page 147:
1.  
2.  
3.  
4.  
5.  

Go Further
Student page 147 Have children complete this section on the student page.

Answers for student page 147:
6.  
7.  

Assessment
Student self-assessment page 147 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children tell time to the hour and half hour?
Materials
Student page 148

Concept
Recognize time to the hour or half-hour.

Get Started
Ask children to tell of their own experiences telling time; for example, getting up for school at a certain time, or having lunch. Using a class clock or demo clock, review with children the importance of the short hand reaching out to the hour and the long hand reaching out to the minutes on the clock.

Today’s Challenge
Student page 148 Use the chart on page 148 in the student book to play Four-in-a-Row. For each description you read from the list below, there is at least one but sometimes two or more squares that match. Instruct children that they are to make an X on one box for each description read. The object of the game is to get four Xs in a row, horizontally, vertically, or diagonally.

Read the following instructions. Mark a box that shows:

7:30  12:30
9:00  3:30
1:30  9:00
12:00 1:00
5:00  1:30
12:30 12:00
7:30  1:00
5:00  3:30

When a child has four in a row, he or she calls out “I have four in a row!” That child should then describe the squares that were marked. If those squares have all been called, that child is the winner.

Answers for student page 148: 1. 4:00  2. 4:30
3. 8:00  4. 11:00

Go over answers with the whole group or check children’s papers individually.

Go Further
Have children complete the chart in the Go Further section of page 148 in the student book.

Assessment
Student self-assessment page 148 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children tell time to the hour and half-hour?
Materials
Student page 149
Math Jumble activity poster and coin cards

Concepts
Recognize combinations for 12 cents.
Count mixed change.

Get Started
Begin by reviewing the penny, nickel, and dime. Have children tell you all they know about the coins. Review how to count coin combinations up to twelve cents. For example, ask, “How much is five pennies worth?” (5 cents) “How much is two nickels worth?” (10 cents) “How much is two nickels and one penny worth?” (11 cents) Continue with similar examples until the children are comfortable with adding pennies, nickels and a dime.

Today’s Challenge
Using the penny, nickel, and dime coin cards, construct the 3 by 3 poster shown. Explain that the object of today’s Math Jumble is to make as many combinations for 12 cents. Cards should be adjoining (left to right or top to bottom) on the poster. Record a few of the amounts students make.

Possible amounts: 
\[ 2e + 10e = 12e \]
\[ 3e + 9e = 12e \]
\[ 4e + 8e = 12e \]
\[ 5e + 7e = 12e \]

Student page 149 Have children complete Today’s Challenge on student page 149. Children circle combinations of coin cards that equal 12e then write the facts. Cards should be adjoining (left to right or top to bottom).

Answers for student page 149: 1.

\[ 2e + 10e = 12e \]
\[ 3e + 9e = 12e \]
\[ 4e + 8e = 12e \]
\[ 5e + 7e = 12e \]

Go Further
Student page 149 Have children total the items on their lunch trays and write the facts.

Answers for student page 149: 2. 
\[ 9e + 3e = 12e \]
\[ 7e + 4e = 11e \]

Assessment
Student self-assessment page 149 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children count mixed change?
Materials
Student page 150
Blank paper

Concept
Identify sums for 10.

Get Started
Write the equation $5 + 5 = 10$ on the chalkboard. Ask the children to suggest other addition problems that equal 10. List the equations; draw picture representations or display concrete objects as a means of checking each equation. Accept equations with more than 2 addends such as $6 + 2 + 2 = 10$.

Student page 150 To introduce the activity, work through the first problem on student page 150. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say ($3 + 5 = 8$) is wrong because “$3 + 5$ equals 8, not 10.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why ($3 + 7 = 10$) is correct.

Today’s Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 150 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 150: 1. $6 + 4 = 10$
2. $4 + 1 + 1 + 3 = 9$
When all children’s papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 150 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children identify sums for 10?
**Pattern Puzzler**

**Materials**
Student page 151
Pennies, nickels, dimes, and quarters

**Concept**
Recognize coin patterns of pennies, nickels, dimes, and quarters for amounts to 50 cents.

**Get Started**
Review with children the name and value of each coin. You might want to have children exchange 5 pennies for 1 nickel, 10 pennies or 2 nickels for 1 dime, and 25 pennies or 2 dimes and 1 nickel for 1 quarter to show equivalent values.

Draw a chart on the board like the one shown below except for the numbers (answers) shown in parentheses. Ask children to help you fill in the chart by asking them these questions:

- How many quarters do you need to have 25 cents? (1) Do you need any pennies or nickels? (no)
- How many quarters do you need to have 26 (27, 28, 29) cents? (one quarter) Do you need any pennies or nickels? (yes)
- How many quarters do you need to have 35 cents? (1) Do you also need any pennies or nickels? (yes) How can you make 35 cents with the fewest number of coins? (one quarter, two nickels)

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**Today's Challenge**
Student page 151 Have children complete the activity on the student page using the fewest number of coins.

**Answers for student page 151:**

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**Go Further**
Student page 151 Have children complete the activity on the student page.

**Answers for student page 151:** 3. 4; I would use a nickel if I needed more pennies. 4. 9; I would use a dime if I needed more pennies.

**Assessment**
Student self-assessment page 151 Have children circle one of the three choices to describe how they feel about this activity.

**Assessment tip** Can children recognize coin patterns of pennies, nickels, dimes, and/or quarters for amounts to 50 cents?
Materials
Student page 152
Math Maze cards (Week 31 Activity 152)
Pennies, nickels, dimes, and quarters

Concept
Count amounts of money up to 50¢ using pennies, nickels, dimes, and/or quarters.

Get Started
Review with children the name and value of each coin. Make sure they can identify a quarter, a dime, a nickel, and a penny by its head and tail.

You might have some children make the following money exchanges to help them grasp equivalent values:

1 nickel = 5 pennies
1 dime = 10 pennies
= 2 nickels
1 quarter = 25 pennies
= 5 nickels
= 2 dimes, 1 nickel

Remember, when counting amounts of money consisting of more than one type of coin, start with the coin with most value, such as a quarter, then count on by tens for dimes, by fives for nickels, and finally by ones for pennies.

Today’s Challenge
Distribute the 18 Math Maze cards for Week 31. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child’s card. Since the answers are pictures children can describe the picture or draw it on the board. Those children needing extra help may use coins to answer the question. The correct sequence of questions and answers is shown on page 208.

Student page 152 When the group has finished playing the game, have children open their books and complete the Today’s Challenge activity on page 152 in the student book.

Answers for student page 152:
1. 
2. 
3. 
4. 
5. 
6. 

Go Further
Student page 152 Have children complete this section on the student page. Children can draw circles with the letters P, N, D, and Q or the amounts 1¢, 5¢, 10¢, and 25¢ on the circles to indicate pennies, nickels, dimes, and quarters.

Answers for student page 152: 7. 1 quarter, 1 dime, 1 nickel 8. 1 quarter, 1 dime, 3 nickels

Assessment
Student self-assessment page 152 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children count amounts of money to 50¢ using pennies, nickels, dimes, and quarters?
Materials
Student page 153

Concept
Review attributes of geometric shapes.

Get Started
Student page 153 To review names of shapes, copy these figures on the board. Ask children to name the shapes on the board, and tell how they are different from one another. Then write the names of the figures.

![squares](squares)  ![circles](circles)

![triangles](triangles)  ![rectangles](rectangles)

Using the student page, have children ring the shape that has curved sides. (A circle is curved and has no straight sides. It can not be made with toothpicks. A square, rectangle, and triangle all have straight lines as sides. They can be made using toothpicks.)

Today's Challenge
Student page 153 Read the riddles to the children and have them draw the pictures and write the name to fit the riddle questions.

1. I can be made using three toothpicks. Draw me. What is my name? (triangle)

2. I can not be made with toothpicks. Draw me. What is my name? (circle)

3. I can be made using four toothpicks. Draw me. What is my name? (square)

Go Further
Student page 153 Have children draw a figure they can make using five toothpicks.

Answers for student page 153: Answers will vary. Check children’s work to see if the drawings are appropriate.

Assessment
Student self-assessment page 153 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children identify some of the attributes of geometric shapes?
Materials
Student page 154
Math Jumble activity poster and 1–9 digit cards

Concept
Recognizing one more and one less than any number.

Get Started
Begin by brainstorming addition and subtraction facts with 1 as one of the addends.

Play the game “One Up, One Down”. Hand out digit cards to all of the children. Make sure each child gets a different number. Have children stand in a circle facing each other. Call out a number from 0–10. If a child is holding a number that is one more or one less than the number, he or she explains the relationship and sits down. For example, if you call out 6, then children with 7 and 5 will sit down. The child with the number 7 would say, “I have an 7 and 7 is one more than 6.” When everyone is sitting, have them remain seated and switch cards. Again call out numbers. This time have children stand when they have one more or one less than the number called.

Today’s Challenge
Using the 1–9 digit cards construct the 4 by 4 poster shown. Explain that the object of today’s Math Jumble is to find pairs of numbers that are one more or one less than each other. Encourage the children to give equations showing that the difference between the numbers is one. For example, $6 - 5 = 1$. Record a few of the facts the children make.

Possible facts:
9 - 8 = 1
8 - 7 = 1
7 - 6 = 1
6 - 5 = 1
5 - 4 = 1
4 - 3 = 1
3 - 2 = 1
2 - 1 = 1

Student page 154 Have children use the Math Jumble on student page 154 to find facts with a difference of one.

Answers for student page 154:
1.

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Go Further
Student page 154 The children fill in the missing numbers in the equations.

Answers for student page 154: 2. 3 3. 6 4. 9 5. 4 6. 8 7. 8

Assessment
Student self-assessment page 154 Have students circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children recognize a number that is one more or one less than another number?
**Rule Out Two**

**Week 31 • Activity 155**

**Materials**
Student page 155
Blank paper
Coins

**Concept**
Count pennies, nickels, and dimes.

**Get Started**
Display real or plastic money or draw symbolic representations on the chalkboard. Label each coin and discuss its value. Practice skip-counting by fives and tens. Select children to count the value of different combinations of pennies, nickels, and dimes before proceeding with the student page.

**Student page 155** To introduce the activity, work through the first problem on student page 155. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (4¢) is wrong because “one dime is more than 4¢.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (17¢) is correct.

**Today’s Challenge**
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

**Student page 155** Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

**Answers for student page 155:** 1. 25¢ 2. 28¢

When all children’s papers have been scored, determine the high scorer(s) for the day.

**Go Further**
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each child to share the problem with another child. The second child solves the problem and signs his or her name.

**Assessment**

**Student self-assessment page 155** Have children circle one of the three choices to describe how they feel about this activity.

**Assessment tip** Can the children count dimes, nickels, and pennies?
Pattern Puzzler

Week 32•Activity 156

Materials
Student page 156
Blue, red, and yellow crayons or markers

Concept
Count by tens using a hundred chart.

Background
Children have already used the hundred chart to help them find and count by twos (Weeks 24, 25) and fives (Weeks 29, 30).

Get Started
Review counting by twos through 30 with children. Then review counting by fives through 30 with them.

Draw only the first three rows of a hundred chart on the board.

Draw 2 hands 🧠🧠 above the chart and ask:
• How many fingers are on two hands? (10) Then circle the 10 in the chart.

Draw another 2 (3) hands and ask:
• How many total fingers are there now? (20; 30). Then circle the 20 (30) in the chart.

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• What pattern do you see in the chart? (The column with numbers ending in zero are circled.)
• When you count by tens, what do the numbers end with? (The numbers end with a 0.)
• Counting by tens, what number comes after 10 (20) after 20? (30) after 30? (40)

Today’s Challenge
Student page 156 Have children complete the activity on the student page.

Answers for student page 156: 1. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90, and 100 should be colored yellow. 2. Possible answers: all the tens numbers end with a zero. They are in a column.

Go Further
Student page 156 Have children complete the activity on the student page.

Answers for student page 156: 3. All the twos (2, 4, 6, . . . , 98, 100) should be colored red. 4. All the fives (5, 10, 15, . . . , 95, 100) should be colored blue. 5. 10, 20, 30, 40, 50, 60, 70, 80, 90, 100

Assessment
Student self-assessment page 156 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children count by tens using a hundred chart?
Materials
Student page 157
Math Maze cards (Week 32 Activity 157)
Red and green crayons or markers

Concept
Use place value to compare numbers to 100.

Get Started
Write pairs of numbers on the board. Then ask children to tell which number is greater, or less, and why. Here are some examples:
• Which number is greater, 25 or 28? (28, because it has more ones and the tens are the same.)
• Which number is less, 25 or 35? (25, because it has fewer tens.)
• Which number if greater, 50 or 39? (50, because it has more tens.)

Today's Challenge
Distribute the 18 Math Maze cards for Week 32. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child’s card.

The correct sequence of questions and answers is shown on page 209.

Student page 157 When the group has finished playing the game, have children open their books and complete the Today’s Challenge activity on page 157 in the student book.

Answers for student page 157: 1–4: Color the following red: 1. 64  2. 38  3. 60  4. 65  5–8. Color the following green: 5. 28  6. 25  7. 16  8. 39

Go Further
Student page 157 Have children complete this section on the student page.

Answers for student page 157: 11. 34, 43, 50, 58, 80, 85

Assessment
Student self-assessment page 157 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children compare two numbers up to 100?
Materials
Student page 158

Concept
Review attributes of geometric solids.

Get Started
Draw a ball, cube, can, and box on the board. Write their names below them. Remind children that a block is a geometric figure with three dimensions—length, width, and depth. It is not a flat shape like a circle or a triangle. Explain that some blocks can roll if they have a curved surface. If you can find these blocks in the room (maybe a box, drinking glass, and ball) demonstrate how some can roll and some cannot.

Have children act out each geometric solid. For the cube, have children sit with their legs crossed, their arms crossed out in front of them, and their heads tucked under. For the ball, have children tuck themselves in a ball and roll around on the floor. For a can, have children stretch out on the floor and roll. For the box, have children sit on the floor with their legs straight out in front of them, their arms straight out in front of them and their heads tucked under.

Today's Challenge
Student page 158 Explain that today you will be playing a game called “Who’s Left in the Box.” Using the chart on the student page, have each child cross out items that fit the clues you will read. You will need to read the clues very slowly and repeat more than once.

Here are the clues to read:
1. If I can sit on a shelf without rolling off, and I play music, cross me out.
2. If I hold shoes and you can stack me in a closet, cross me out.
3. If I have six faces and hold yummy cookies, cross me out.
4. If children like to stack me up to build castles and buildings, cross me out.
5. Circle me if I can roll on the floor or off a table. I am who is left in the box.

Answers for student page 158: 1. The soda can and kickball are left. 2. They can roll. 3. ball and can.

Go Further
Student page 158 Have children draw two items that can roll.

Answers for student page 158: Check to see that children are drawing items that can roll.

Assessment
Student self-assessment page 158 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children identify blocks that roll?
Materials
Student page 159
Math Jumble activity poster and 0–9 digit cards

Concept
Recognize a difference of two.

Get Started
Begin by brainstorming addition facts with 2 as one of the addends. Record the facts the children suggest. Then have the children help you rewrite each addition fact as a subtraction fact showing that the difference is two.

3 + 2 = 5  \quad 5 - 3 = 2
5 + 2 = 7  \quad 7 - 5 = 2
8 + 2 = 10  \quad 10 - 8 = 2

Today's Challenge
Using the 0–9 digit cards, construct the 4 by 4 poster shown. Explain that the object of today's Math Jumble is to find as many pairs of numbers that are two more or two less than each other. Remind children that these numbers have a difference of 2 and that we can write that with a subtraction equation. For example, 8 and 6 have a difference of two, and we write 8 - 6 = 2. Pairs of numbers are made by adjoining numbers (top to bottom or left to right) from the poster. Record a few of the facts children make.

Possible facts: 2 - 0 = 2
3 - 1 = 2
4 - 2 = 2
5 - 3 = 2
6 - 4 = 2
7 - 5 = 2
8 - 6 = 2
9 - 7 = 2

Student page 159 Have children use the Math Jumble on the student page to find pairs of numbers that have a difference of two. Have them ring their pairs of numbers.

Answers for student page 159: 1.

Go Further
Student page 159 Have each child use the blank grid on student page 159 and numbers 0–9 to create their own Math Jumble. Children then share their Math Jumble with a friend. The friend finds number pairs with a difference of two and signs their name.

Answers for student page 159: Answers will vary. Check children’s work.

Assessment
Student self-assessment page 159 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children find pairs of numbers with a difference of two?
Rule Out Two

Week 32 Activity 160

Materials
Student page 160
Blank paper

Concept
Identify three-dimensional shapes that can slide.

Get Started
Draw and label a ball, a cone, a cube, a can, and a box on the chalkboard. Relate these shapes to items in the classroom environment. Discuss each shape and its distinguishing attributes, focusing on the possibility of whether or not the shape can slide, roll, or slide and roll.

Today’s Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 160 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 160: 1. ball 2. can
When all children’s papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 160 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children differentiate between shapes that can roll, slide, or roll and slide?
Materials
Student page 161

Concept
Recognize twos, fives, and tens counting patterns and indicate which two, five, or ten comes next.

Get Started
Review counting by twos, fives, and tens with children. Use the hundred chart, if needed. Then write exercises such as these on the chalkboard:
- What number comes next?
  50, 55, 60, ___  (65)
  74, 76, 78, ___  (80)
  40, 50, 60, ___  (70)

Ask children about the number pattern for each set of numbers.

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Today's Challenge
Student page 161 Have children complete the activity on the student page.

Answers for student page 161: 1. 30, 40, 50, 60, 70, 80, 90, 100 2. 46, 48, 50, 52, 54, 56, 58, 60 3. 25, 30, 35, 40, 45, 50, 55, 60 4. 90 5. 84 6. 30 7. 40 8. 50 9. 62 10. 100 11. 100 12. 100 13. 80

Go Further
Student page 161 Have children complete the activity on the student page.

Answers for student page 161: 14. 10¢, 12¢

Assessment
Student self-assessment page 161 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children recognize twos, fives, and tens counting patterns and indicate which two, five, or ten comes next?
Materials
Student page 162
Math Maze cards (Week 33 Activity 162)

Concept
Add multiples of ten for sums through 100.

Get Started
Review a few addition facts through sums of 10 with children. Write the following addition sentences on the board:

\[ 3 + 3 = \quad 3 + 4 = \quad 3 + 5 = \quad 3 + 6 = \quad 3 + 7 = \]

Have children say and write the sums. Then write the following addition sentences under each of the other addition sentences above:

\[ 30 + 30 = \quad 30 + 40 = \quad 30 + 50 = \quad 30 + 60 = \quad 30 + 70 = \]

Ask children how the addition sentences are alike and different. Have them say and write these sums and then compare the addends and sums of the two sets of addition sentences. Point out that knowing a basic addition fact can help children add greater numbers such as 30 and 50.

Today's Challenge
Distribute the 18 Math Maze cards for Week 33. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child’s card.

The correct sequence of questions and answers is shown on page 209.

Student page 162 When the group has finished playing the game, have children open their books and complete the Today’s Challenge activity on page 162 in the student book.

Answers for student page 162: 1. 6; 60 2. 8; 80 3. 10; 100 4. 6; 60 5. 8; 80 6. 9; 90

Go Further
Student page 162 Have children complete this section on the student page.

Answers for student page 162: Check the addition table for answers.

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Assessment
Student self-assessment page 162 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children add multiples of ten for sums through 100?
Materials
Student page 163
Blank 3 by 3 pieces of paper or index cards
Tape
Crayons or markers

Concept
Read a graph.

Get Started
Remind children that a graph is a drawing that helps us read data.

Copy the graph below onto the board. Have children draw a picture on a note card to represent their favorite meal of the day. Have each child place his or her note card on the graph. After each child graphs his or her piece, discuss how the graph changes.

Possible questions to ask:
How many people like breakfast?
How many more people like lunch than dinner?
How many people have put a card on the graph altogether?

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<thead>
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<tbody>
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<td>5</td>
<td></td>
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<tr>
<td>4</td>
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<tr>
<td>3</td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Favorite Meal

Breakfast  Lunch  Dinner

Today's Challenge
Student page 163 Have children look at the graph on the student page. Explain that children in a class were asked to graph their favorite pet. Have children point to each pet, say the name, and tell how many children voted for that pet. Read the riddles and ask children to write their answers.

1. I have four legs and three people voted for me. What am I? (cat)
2. Two people voted for me and I can fly. What am I? (bird)
3. I have a tail and four people voted for me. What am I? (dog)

Go Further
Student page 163 Have children color in the graph by looking at the tally marks.

Answers for student page 163: Check to see that children have colored in the correct number for each weather type: partly cloudy 2, sunny 5, snowy 4, rainy 1.

Assessment
Student self-assessment page 163 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children understand graphing?
Materials
Student page 164
Math Jumble activity poster and coin cards

Concept
Recognize a difference of 1 cent.

Get Started
Begin by reviewing coin addition with 1 cent as one of the addends. Record the facts the children suggest. Then have the children help you rewrite each coin addition fact as a subtraction fact showing that the difference is one cent.

3 cents + 1 cent = 4 cents  4 cents − 3 cents = 1 cent
5 cents + 1 cent = 6 cents  6 cents − 5 cents = 1 cent
8 cents + 1 cent = 9 cents  9 cents − 8 cents = 1 cent

Today's Challenge
Using the coin cards construct the 3 by 4 poster shown. Explain that the object of today's Math Jumble is to find as many pairs of adjacent coin cards that show amounts one cent more or one cent less than each other. Encourage the children to give equations showing that the difference between the numbers is one. For example, 6 cents − 5 cents = 1 cent. Record a few of the facts the children make.

Possible facts: 10 cents − 9 cents = 1 cent
9 cents − 8 cents = 1 cent
8 cents − 7 cents = 1 cent
7 cents − 6 cents = 1 cent
6 cents − 5 cents = 1 cent
5 cents − 4 cents = 1 cent
4 cents − 3 cents = 1 cent
3 cents − 2 cents = 1 cent
2 cents − 1 cent = 1 cent

Student page 164 Have students use the Math Jumble on student page 154 to find facts with a difference of one cent.

Answers for student page 164:
1.

Go Further
Student page 164 The children fill in the missing numbers in the equations.

Answers for student page 164: 2. 5 cents (or 1 nickel) 3. 8 cents 4. 9 cents 5. 4 cents 6. 4 cents

Assessment
Student self-assessment page 164 Have students circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children recognize when one coin combination is one cent more or one cent less than another coin combination?
Materials
Student page 165
Blank paper

Concept
Read a three-digit number.

Get Started
Draw a place value chart with 471 displayed on the chalkboard. Point out the position and value of each digit.

<table>
<thead>
<tr>
<th>hundreds</th>
<th>tens</th>
<th>ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>7</td>
<td>1</td>
</tr>
</tbody>
</table>

Write 471 in expanded form (400 + 70 + 1) to explain how to read the number. Write other numbers in the chart to provide the children with practice reading three-digit numbers.

Student page 165 To introduce the activity, work through the first problem on student page 165. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (50032) is wrong because “a number in the hundreds has three numbers (digits).” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (532) is correct.

Today’s Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Then explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 165 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 165: 1. 659
2. eight hundred forty-three

When all children’s papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 165 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children read three-digit numbers?
Materials
Student page 166

Concept
Use an addition table for facts to 18 and the Order Property of Addition to find sums.

Background
The Order Property of Addition says that changing the order of the addends does not change the sum.

Get Started
Draw an addition table on the board through the fives. Have individual children come to the board to say the addition fact and then write the sum in the appropriate square in the table.

Urge children to look carefully at the addition table and ask:
• Show how you can find the sum of $3 + 2$. What is the sum? ($3$ across, $2$ down, sum is $5$)
• Can anyone show another way to find the same sum on the addition table using the same numbers? ($2$ across, $3$ down, sum is $5$) Tell children that when they know one addition fact, they also know another fact with the same numbers. You may also wish to tell children that this is called the Order Property of Addition.

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
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<tr>
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<td>6</td>
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<td>9</td>
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<tr>
<td>5</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
</tbody>
</table>

Today’s Challenge
Student page 166 Have children complete the activity on the student page.

Answers for student page 166: $1. 12$ $12$ $2. 15$ $15$ $3. 8$ $8$ $4. 14$ $14$

Go Further
Student page 166 Have children complete the activity on the student page.

Answers for student page 166: $5$. Answers will vary. There are many patterns in the addition table: the Order Property, the Zero Property, doubles facts along the diagonal downward to the right; same sums along diagonals upward to the right.

Assessment
Student self-assessment page 166 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can students use an addition table for facts to 18 and the Order Property of Addition to find sums?
Materials
Student page 167
Math Maze cards (Week 34 Activity 167)

Concept
Practice sums and differences related to addition facts through 15

Get Started
Review sums of 13, 14, and 15 with children. Write the addition facts shown below on the board. Have children say and write the sums. Look at the sum for 14. One of them is a double: 7 + 7 = 14. Ask children about other addition facts that have doubles for addends.

<table>
<thead>
<tr>
<th>Sums of 13</th>
<th>Sums of 14</th>
<th>Sums of 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 + 6 = ___</td>
<td>7 + 7 = ___</td>
<td>8 + 7 = ___</td>
</tr>
<tr>
<td>8 + 5 = ___</td>
<td>8 + 6 = ___</td>
<td>9 + 6 = ___</td>
</tr>
<tr>
<td>9 + 4 = ___</td>
<td>9 + 5 = ___</td>
<td>10 + 5 = ___</td>
</tr>
</tbody>
</table>

Use this set of addition problems again. This time, erase one or both of the addends so that children can say and write in the missing numbers.

Review the differences related to sums of 13, 14, and 15. Write the subtraction sentences shown below on the board next to the corresponding sets of addition problems. Have children say and write the differences. Point out how the addition and subtraction facts are related.

<table>
<thead>
<tr>
<th>Differences of 13</th>
<th>Differences of 14</th>
<th>Differences of 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>13 - 9 = ___</td>
<td>14 - 9 = ___</td>
<td>15 - 9 = ___</td>
</tr>
<tr>
<td>13 - 8 = ___</td>
<td>14 - 8 = ___</td>
<td>15 - 8 = ___</td>
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<tr>
<td>13 - 7 = ___</td>
<td>14 - 7 = ___</td>
<td>15 - 7 = ___</td>
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<td>13 - 6 = ___</td>
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<td>13 - 5 = ___</td>
<td>14 - 5 = ___</td>
<td>15 - 5 = ___</td>
</tr>
<tr>
<td>13 - 4 = ___</td>
<td>14 - 4 = ___</td>
<td>15 - 4 = ___</td>
</tr>
</tbody>
</table>

Today's Challenge
Distribute the 18 Math Maze cards for Week 34. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child’s card.

The correct sequence of questions and answers is shown on page 210.

Student page 167 When the group has finished playing the game, have children open their books and complete the Today’s Challenge activity on page 167 in the student book.

Answers for student page 167:

1. 8 + 5 = 13
2. 6 + 9 = 15
3. 7 + 9 = 16

Go Further
Student page 167 Have children complete this section on the student page.

Answers for student page 167: 4. 1 + 1 = 2,
2 + 2 = 4, 3 + 3 = 6, 4 + 4 = 8, 5 + 5 = 10,
6 + 6 = 12, 7 + 7 = 14; some children might also list 0 + 0 = 0 or 8 + 8 = 16, 9 + 9 = 18.

Assessment
Student self-assessment page 167 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children find the sums and differences related to the sums through 15?
**Materials**
Student page 168

**Concept**
Recognize tens and ones.

**Get Started**
Write the following number on the board.

57

Ask children: How many tens are there? How many ones are there?

Circle the tens. Underline the ones.

57

**Today’s Challenge**
Student page 168 Use the chart on page 168 in the student book to play Four-in-a-Row. For each description you read from the list below, there is at least one but sometimes two or more squares that match. Instruct children that they are to mark one box (with an X or with a marker if available) for each description read. The object of the game is to get four Xs in a row, horizontally, vertically, or diagonally.

Read the following instructions. Mark a box that shows:

12  73
57  25
82  64
64  82
30  57
49  49
57  30
64  12

When a child has four in a row, he or she calls out “I have four in a row!” That child should then describe the squares that were marked. If those squares have all been called, that child is the winner.

**Go Further**
Have children complete the chart in the Go Further section of page 168 in the student book.

**Answers for student page 168:**
1. 5 tens and 9 ones
2. 9 tens and 5 ones
3. 6 tens and 3 ones
4. 3 tens and 6 ones

Go over answers with the whole group or check children’s papers individually.

**Assessment**
Student self-assessment page 168 Have children circle one of the three choices to describe how they feel about this activity.

**Assessment tip** Do children recognize tens and ones?
Materials
Student page 169
Math Jumble activity poster and coin cards

Concept
Recognize a difference of two cents in coin combinations.

Get Started
Begin by reviewing coin addition with 2 cents as one of the addends. Record the facts the children suggest. Then have the children help you rewrite each coin addition fact as a subtraction fact showing that the difference is two cents.

3 cents + 2 cents = 5 cents
5 cents - 3 cents = 2 cents

4 cents + 2 cents = 6 cents
6 cents - 4 cents = 2 cents

7 cents + 2 cents = 9 cents
9 cents - 7 cents = 2 cents

Possible facts:
3¢ - 1¢ = 2¢
4¢ - 2¢ = 2¢
5¢ - 3¢ = 2¢
6¢ - 4¢ = 2¢
7¢ - 5¢ = 2¢
8¢ - 6¢ = 2¢
9¢ - 7¢ = 2¢

Student page 169 Have children use the Math Jumble on the student page to find as many pairs of coin cards that have a difference of two cents. Have them ring their pairs of cards.

Possible answers for student page 169:
1. 1¢ + 2¢ = 3¢
2¢ + 2¢ = 4¢
3¢ + 2¢ = 5¢
4¢ + 2¢ = 6¢
5¢ + 2¢ = 7¢
6¢ + 2¢ = 8¢
7¢ + 2¢ = 9¢

2. 3¢ - 1¢ = 2¢
4¢ - 2¢ = 2¢
5¢ - 3¢ = 2¢
6¢ - 4¢ = 2¢
7¢ - 5¢ = 2¢
8¢ - 6¢ = 2¢
9¢ - 7¢ = 2¢

Go Further
Student page 169 Have each child use the grid on the student page to create a Math Jumble to share with a friend.

Answers for student page 169: 3. 2 + 2 = 4
4. 4 + 2 = 6 5. 6 + 2 = 8 6. 8 + 2 = 10
7. Answers will vary. They may notice that the answers are even numbers.

Assessment
Student self-assessment page 169 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children find pairs of coin combinations with a difference of two cents?
Materials
Student page 170
Blank paper

Concept
Identify sums for 9.

Get Started
Write the equation 5 + 4 = 9 on the chalkboard. Ask the children to suggest other addition problems that equal 9. List the equations; draw pictures or display concrete objects as a means of checking each equation. Accept equations with more that 2 addends such as 3 + 3 + 3 = 9.

Student page 170 To introduce the activity, work through the first problem on student page 170. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (3 + 7 = 10) is wrong because “3 + 7 equals 10, not 9.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (4 + 5 = 9) is correct.

Today’s Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 170 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 170: 1. 6 + 3 = 9
2. 4 + 1 + 3 = 8

When all children’s papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 170 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children identify sums for 9?
Materials
Student page 171
Red and yellow crayons or markers

Concept
Use two colors to show an AAB pattern on a calendar month.

Background
Children have already shown patterns on a calendar month (Weeks 22, 27).

Get Started
Draw a calendar month on the chalkboard. Begin by shading the 3 white. Then ask one child at a time to come to the chalkboard and shade every third day with chalk. Ask children the following questions:
• What kind of color pattern do you see? (There are white diagonals.)
• Which numbers are on the white diagonals? Say them. (3, 6, 9, 12, 15, 18, 21, 24, 27, 30)
• Use the calendar pattern to count by threes.

<table>
<thead>
<tr>
<th>April</th>
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<tbody>
<tr>
<td></td>
<td>Sunday</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>18</td>
<td>15</td>
</tr>
<tr>
<td>25</td>
<td>22</td>
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</tbody>
</table>

Today's Challenge
Student page 171 Have children complete the activity on the student page.

Answers for student page 171: 1. red, red, yellow, red, red, yellow, red, red, yellow, red, red, yellow 2. The numbers 3, 6, 9, 12, 15, 18, 21, 24, 27, and 30 should be colored yellow. All the other numbers should be colored red. 3. 3, 6, 9, 12, 15, 18, 21, 24, 27, 30

Go Further
Student page 171 Have children complete the activity on the student page.

Answers for student page 171: 4. 3, 9, 15 5. 6, 12, 18, 24, 30 6. 21, 27

Assessment
Student self-assessment page 171 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children use two colors to show an AAB pattern on a calendar month?
**Materials**
Student page 172
Math Maze cards (Week 35 Activity 172)
Nickels and dimes

**Concepts**
Skip count by twos, fives, and tens.
Name the number that comes next in a sequence.

**Get Started**
Review skip counting by fives with children using nickels. Count by fives to 50¢. Then continue counting by fives using shorter sequences such as: 60, 65, 70, 75, 80. Review skip counting by tens using dimes. Count up to 100¢. Children can count by twos using other children’s hands, feet, shoes, eyes, or ears.

After counting money or objects by twos, fives, and tens, ask the children to say the next number in a sequence of numbers. Here are some examples:
- What comes next after 20, 22, 24, 26? (28)
- What comes next after 20, 25, 30, 35? (40)
- What comes next after 20, 30, 40, 50? (60)

**Today’s Challenge**
Distribute the 18 Math Maze cards for Week 35. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

**Instructions for playing Math Maze** Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child’s card.

The correct sequence of questions and answers is shown on page 211.

**Student page 172** When the group has finished playing the game, have children open their books and complete the Today’s Challenge activity on page 172 in the student book.

**Answers for student page 172:**
1. 35, 40, 45, 50, 55, 60, 65 2. 20, 30, 40, 50, 60, 70, 80 3. 12, 14, 16, 18, 20, 22, 24

**Go Further**
**Student page 172** Have children complete this section on the student page.

**Answers for student page 172:**

**Assessment**
**Student self-assessment page 172** Have children circle one of the three choices to describe how they feel about this activity.

**Assessment tip** Can children skip count by twos, fives, and tens, and name the number that comes next?
Materials
Student page 173
Blank paper
Crayons

Concept
Recognize one fourth.

Get Started
Fractions are part of every day life. Review one fourth and one half by encouraging children to share their experiences with fractions. Draw the following on the board.

Ask children, how many of the four circles are striped? (1 out of 4)
How many of the four circles are dotted? (1 out of 4)
How many of the four circles are solid? (2 out of 4)

Today's Challenge
Explain that today you will be playing a game called "Who Wants to be the Top Scorer?" Using a red, yellow, and green crayon, have each student color in the four circles on their student page. All three colors must be used. Then ask students to number their papers from 1 to 5.

As you ask each of five questions, have students look at the set of circles and answer the question. Yes answers will score tally points. Here are the questions to ask:

1. Are one out of four of your circles red? If yes, score 1 tally point.
2. Are one half of your circles yellow? If yes, score 1 tally point.
3. Are one out of four of your circles green? If yes, score 2 tally points.
4. Are one half of your circles red? If yes, score 2 tally points.
5. Are one out of four of your circles yellow? If yes, score 3 tally points.

Have students find their total scores. Determine which student has the highest score. Have that student show his or her paper and explain the points.

Go Further
Student page 173 Have students answer the questions on student page.


Assessment
Student self-assessment page 173 Have students circle one of the three choices to describe how they feel about this activity.

Assessment tip Do children recognize $\frac{1}{2}$?
Materials
Student page 174
Math Jumble activity poster and 0–9 digit cards.

Concept
Recognize even numbers.

Get Started
Write Odd and Even on the board. Draw one sock on the board. Ask "What good is one sock?" Let the children make the point that a sock is only useful if you have another sock to go with it. Stress that one is an odd number of socks. Write the number 1 under the word Odd. Draw a second sock next to the first sock. Ask "How many socks do I have now?" (2) "Is two a useful number of socks?" (yes) Stress that two is an even number. Write 2 under the word Even. Continue to draw socks, one at a time, in such a way that each odd number of socks clearly has one leftover unpaired sock. Record each number from 1 through 20 as odd or even in the table.

Today's Challenge
Using the 0–9 digit cards, construct the 4 by 4 poster shown. Explain that the object of today's Math Jumble is to find pairs of numbers that added together make even number sums. Record a few of the facts students make.

Possible facts:
0 + 4 = 4
0 + 6 = 6
1 + 3 = 4
1 + 5 = 6
1 + 7 = 8
1 + 9 = 10
2 + 4 = 6
2 + 6 = 8
4 + 8 = 12
6 + 6 = 12
6 + 8 = 14

Student page 174 Have students use the Math Jumble on student page to find pairs of numbers that have even number sums.

Possible answers for student page 174: Children may loop any of the following pairs of addends.
1.
0 + 4 = 4
0 + 6 = 6
1 + 3 = 4
1 + 5 = 6
1 + 7 = 8
1 + 9 = 10
2 + 4 = 6
2 + 6 = 8
4 + 8 = 12
6 + 6 = 12
6 + 8 = 14

Go Further
Student page 174 Have children use digits from their phone number to make addition problems and identify the sums as odd or even.


Assessment
Student self-assessment page 174 Have students circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children identify even and odd numbers?
Materials
Student page 175
Blank paper
Demonstration clock

Concept
Tell time to the half hour.

Get Started
Draw a clock face on the chalkboard or display a demonstration clock if available. Explain the functions of the hands on the clock and the order in which they are read. Discuss the clock as a whole hour; divide the clock face in half to introduce the term half hour. Draw or display time to the whole and half hour on the clock to provide the children practice in telling time.

Student page 175 To introduce the activity, work through the first problem on student page 175. Read or ask a child to read the problem. Explain that when you have a problem and you are given several answers to choose from, it helps if you can “rule out” some of the answers. Ask a volunteer to choose an answer that he or she knows is wrong and tell why the answer is wrong. For example, a child might say (6:15) is wrong because “the minute hand is on the 6 which is half an hour or 30 minutes.” (If members of the class do not agree with the volunteer’s response or reason, discuss until a consensus is reached.) Ask a second volunteer to rule out another answer and proceed in the same way. Then ask children to choose the correct answer from the remaining two choices and fill in that circle. Be sure children understand why (3:30) is correct.

Today’s Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 175 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 175: 1. 12:30  2. 7:30
When all children’s papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 175 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children tell time to the half hour?
**Materials**
Student page 176
Crayon

**Concept**
Count on by tens from a given number.

**Get Started**
Review counting by tens with children. Use the hundred chart, if needed. Circle a number on the chart, such as 3.

- Ask, “Can you count on by tens from 3?” For example, what is 3 and 10 more? (13) Then, what is 13 plus 10 more? (23)
  (3, 13, 23, 33, 43, 53, 63, 73, 83, 93)

Circle another number such as 26 and ask:

- Can you count on by tens from 26?
  (26, 36, 46, 56, 66, 76, 86, 96)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
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<td>67</td>
<td>68</td>
<td>69</td>
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<td>71</td>
<td>71</td>
<td>72</td>
<td>73</td>
<td>74</td>
<td>75</td>
<td>76</td>
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<td>78</td>
<td>79</td>
<td>80</td>
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<td>90</td>
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<tr>
<td>91</td>
<td>91</td>
<td>92</td>
<td>93</td>
<td>94</td>
<td>95</td>
<td>96</td>
<td>97</td>
<td>98</td>
<td>99</td>
<td>100</td>
</tr>
</tbody>
</table>

**Today's Challenge**
**Student page 176** Have children complete the activity on the student page.

**Answers for student page 176:**
1. 32, 42, 52, 62, 72, 82, 92 2. 18, 28, 38, 48, 58, 68, 78, 88, 98
3. 16, 26, 36, 46, 56, 66, 76, 86, 96 4. 35, 45
5. 44, 54, 64, 74 6. 37, 47, 57, 67 7. 66, 76, 86, 96 8. 59, 69, 79, 89

**Go Further**
**Student page 176** Have children complete the activity on the student page.

**Answers for student page 176:**
9. 17, 27, 37, 47, 57, 67, 77, 87, 97

**Assessment**
**Student self-assessment page 176** Have children circle one of the three choices to describe how they feel about this activity.

**Assessment tip** Can children count on by tens from a given number?
Math Maze

Week 36 Activity 177

Materials
Student page 177
Math Maze cards (Week 36 Activity 177)

Concepts
Practice sums and differences related to addition facts through 18

Get Started
Review sums of 16, 17, and 18 with children. Write the addition facts shown below on the board. Have children say and write the sums.

<table>
<thead>
<tr>
<th>Sums of 16</th>
<th>Sums of 17</th>
<th>Sums of 18</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 + 8 = 16</td>
<td>9 + 8 = 17</td>
<td>9 + 9 = 18</td>
</tr>
<tr>
<td>9 + 7 = 16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Use this set of addition problems again. This time, erase one or both of the addends so that children can say and write in the missing numbers.

Review differences related to the sums of 16, 17, and 18. Write the subtraction sentences below on the board next to the corresponding sets of addition problems. Have children say and write the differences.

<table>
<thead>
<tr>
<th>Differences of 16</th>
<th>Differences of 17</th>
<th>Differences of 18</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 – 8 = 8</td>
<td>17 – 8 = 9</td>
<td>18 – 9 = 9</td>
</tr>
<tr>
<td>16 – 7 = 9</td>
<td>17 – 9 = 8</td>
<td></td>
</tr>
<tr>
<td>16 – 9 = 7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Today’s Challenge
Distribute the 18 Math Maze cards for Week 36. Each child should receive at least one card, but since all cards need to be distributed, some children may need to get more than one card. Use the cards to play the Math Maze game.

Instructions for playing Math Maze Ask children to look at their cards. Ask one child to read the question that is written on his or her card. Next ask, “Who has the card with the answer to the question just read?” Ask that child to read the answer, and then read the question on his or her card. Play continues until all questions have been answered. The last answer to be read should be the answer on the first child’s card

The correct sequence of questions and answers is shown on page 212.

Student page 177 When the group has finished playing the game, have children open their books and complete the Today’s Challenge activity on page 177 in the student book.

Answers for student page 177: Across:

<table>
<thead>
<tr>
<th>1. 1</th>
<th>5</th>
<th>2. 1</th>
<th>6</th>
<th>3. 1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>14</td>
<td>7</td>
<td>1</td>
<td>5</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td>10</td>
<td>9</td>
<td>15</td>
<td>8</td>
</tr>
</tbody>
</table>

Go Further
Student page 177 Have children complete this section on the student page.

Answers for student page 177: 9 + 0 = 9,
8 + 1 = 9, 7 + 2 = 9, 6 + 3 = 9, 5 + 4 = 9,
10 – 1 = 9, 11 – 2 = 9, 12 – 3 = 9, 13 – 4 = 9,
14 – 5 = 9, 15 – 6 = 9, 16 – 7 = 9, 17 – 8 = 9,
18 – 9 = 9

Assessment
Student self-assessment page 177 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children find finds sums and differences related to sums through 18?
**Game Time**

**Materials**
Student page 178

**Concept**
Select appropriate tools for measuring.

**Get Started**
Explain to children that there are many tools for measuring length, time, and temperature.

Draw the different tools on the board and write their names.

![clock]  ![ruler]  ![calendar]  ![thermometer]

Have children share their own experiences with measuring. Ask:
- When would you use a thermometer to measure?
- When would you use a clock?
- When would you use a calendar?
- When would you use a ruler to measure?

**Today's Challenge**

**Student page 178** Explain that today you will be playing a game called “Who Wants to be the Top Scorer?” Have children ring a measurement tool they would like to use to play the game. As you ask each of five questions, have children look at their tool and answer the question. If their answer is yes, then they are to make a checkmark. Yes answers will score a point. Here are the questions to ask:

1. Does your measurement tool tell you what day yesterday was? If yes, make a checkmark.
2. Does your measurement tool help you know what today’s temperature is? If yes, make a checkmark.
3. Does your measurement tool help you know what time you wake up for school? If yes, make a checkmark.
4. Does your measurement tool help you find out how far you can jump? If yes, make a checkmark.
5. Does your measurement tool tell you what day of the week your birthday will be on? If yes, make a checkmark.

The top scorer(s) will have a calendar.

Have children find their total scores by counting their checks. Ask a volunteer to name his or her tool and explain the score.

**Go Further**

**Student page 178** Have children answer questions on student page 178.

**Answers for student page 178**: 1. The month is May. 2. The 17th is on Thursday. 3. There are 4 Mondays. 4. The month after May is June.

**Assessment**

**Student page 178** Have children circle one of the three choices to describe how they feel about this activity.

**Assessment tip** Are children able to identify the appropriate tool for measuring?
Materials
Student page 179
Math Jumble activity poster and 0–7 digit cards

Concept
Recognize odd numbers.

Get Started
Write Odd and Even on the board. Call out a number between 1 and 10. Have that number of children stand up and form pairs. If there is one child left over, he or she is the odd man out, the number is odd, and the number is recorded under the odd column. If each child has a partner, the number is even, and the number is recorded under the even column. Continue the game until all numbers from 1 through 10 have been listed. Then write in the numbers 11 through 20.

Today's Challenge
Using the 0–7 digit cards, construct the 4 by 4 poster shown. Explain that the object of today's Math Jumble is to find pairs of numbers that have odd number sums. Pairs of numbers are made by adjoining numbers (top to bottom or left to right) from the poster. Record a few of the facts children make.

Possible facts:
0 + 5 = 5
1 + 2 = 3
1 + 6 = 7
2 + 3 = 5
2 + 5 = 7
3 + 4 = 7
3 + 6 = 9
4 + 5 = 9
4 + 7 = 11

Student page 179 Have children use the Math Jumble on student page 179 to find pairs of numbers that have odd number sums.

Possible answers for student page 179: Children may loop any of the following pairs of addends. 1.
0 + 5 = 5
1 + 2 = 3
1 + 6 = 7
2 + 3 = 5
2 + 5 = 7
3 + 4 = 7
3 + 6 = 9
4 + 5 = 9
4 + 7 = 11

Go Further
Student page 179 Have children complete the activity in the Go Further section.

Answers for student page 179: Answers will vary. Check children's work.

Assessment
Student self-assessment page 179 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can children identify odd and even numbers?
Materials
Student page 180
Blank paper

Concept
Identify three-dimensional shapes that can and cannot roll.

Get Started
Draw and label a ball, a cone, a cube, a can, and a box on the board. Relate these shapes to items in the classroom environment. Discuss each shape and its distinguishing attributes focusing on the possibility of whether or not the shape can roll, slide, or roll and slide.

Today’s Challenge
Divide children into groups of 2, 3, or 4. Children will be able to consult with members of the group, but each child will complete the page and will receive an individual score.

Explain how points will be scored in today’s activity. Each child will receive 10 points for each answer (up to 2) that was ruled out for a good reason (a maximum of 20 points) and 10 points for choosing the correct answer. So, the maximum number of points for each question is 30 and the maximum number of points for the day is 60.

Student page 180 Have children work through each problem, ruling out two answers, giving reasons, and then choosing the correct answer. When a group has completed both problems, the members should bring you their papers for scoring. Discuss errors with individuals or the group if necessary.

Answers for student page 180: 1. ball 2. cone

When all children’s papers have been scored, determine the high scorer(s) for the day.

Go Further
On a separate sheet of paper, have each child write his or her name and then create a multiple-choice problem similar to the problems just solved. Ask each to share the problem with another child. The second child solves the problem and signs his or her name.

Assessment
Student self-assessment page 180 Have children circle one of the three choices to describe how they feel about this activity.

Assessment tip Can the children differentiate between shapes that can roll, slide, or roll and slide?
# Questions and Answers for Math Maze Cards

The tables below show the sequence that the questions and answers should follow. Find the starting question. Look across the row for the correct answer. Then go on to the next question below and continue until you reach the end of the table. Then go to the top of the table and read down until you reach the starting question again.

<p>| Who has the group for 3?   | I have 🐻 🐻 🐻. |
| Who has the number for 🐻? | I have 1.          |
| Who has the group for 5?  | I have 🐺 🐺 🐺 🐺 🐺. |
| Who has the number for 🐊 🐊 🐊 🐊 🐊? | I have 6.          |
| Who has the group for 2?  | I have 🐼 🐼.      |
| Who has the number for 🐘 🐘 🐘 🐘 🐘 🐘 🐘 🐘? | I have 8.          |
| Who has the number for 🦓 🦓 🦓 🦓? | I have 4.          |
| Who has the group for 9?  | I have 🐨 🐨 🐨 🐨 🐨 🐨 🐨 🐨 🐨. |
| Who has the number for 🦓 🦓 🦓 🦓 🦓 🦓 🦓 🦓 🦓? | I have 5.          |
| Who has the number for 🦓 🦓 🦓 🦓 🦓 🦓 🦓 🦓? | I have 10.         |
| Who has the group for 6?  | I have 🐧 🐧 🐧 🐧 🐧 🐧. |
| Who has the number for 🐸 🐸? | I have 2.          |
| Who has the group for 7?  | I have 🐨 🐨 🐨 🐨 🐨 🐨 🐨. |
| Who has the group for 1?  | I have 🐻 🐻.      |
| Who has the number for 🐻 🐻 🐻? | I have 3.          |
| Who has the group for 4?  | I have 🐘 🐘 🐘 🐘. |
| Who has the group for 8?  | I have 🐊 🐊 🐊 🐊. |
| Who has the number for 🐊 🐊 🐊 🐊 🐊 🐊 🐊 🐊 🐊? | I have 7.          |</p>
<table>
<thead>
<tr>
<th>Who has more than</th>
<th>I have</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who has fewer than</td>
<td>I have</td>
</tr>
<tr>
<td>Who has more than</td>
<td>I have</td>
</tr>
<tr>
<td>Who has the same as</td>
<td>I have</td>
</tr>
<tr>
<td>Who has fewer than</td>
<td>I have</td>
</tr>
<tr>
<td>Who has more than</td>
<td>I have</td>
</tr>
<tr>
<td>Who has the same as</td>
<td>I have</td>
</tr>
<tr>
<td>Who has fewer than</td>
<td>I have</td>
</tr>
<tr>
<td>Who has more than</td>
<td>I have</td>
</tr>
<tr>
<td>Who has the same as</td>
<td>I have</td>
</tr>
<tr>
<td>Who has fewer than</td>
<td>I have</td>
</tr>
<tr>
<td>Who has the same as</td>
<td>I have</td>
</tr>
<tr>
<td>Who has fewer than</td>
<td>I have</td>
</tr>
<tr>
<td>Who has the same as</td>
<td>I have</td>
</tr>
<tr>
<td>Who has more than</td>
<td>I have</td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Who has the name of this shape?</td>
<td>I have square.</td>
</tr>
<tr>
<td>Who has the picture of a triangle?</td>
<td>I have △</td>
</tr>
<tr>
<td>Who has the name of this shape?</td>
<td>I have circle.</td>
</tr>
<tr>
<td>Who has the number of sides a rectangle has?</td>
<td>I have 4</td>
</tr>
<tr>
<td>Who has the picture of a rectangle?</td>
<td>I have □</td>
</tr>
<tr>
<td>Who has the name of this shape?</td>
<td>I have △</td>
</tr>
<tr>
<td>Who has the picture of a hexagon?</td>
<td>I have ◊</td>
</tr>
<tr>
<td>Who has the number of sides a circle has?</td>
<td>I have 0</td>
</tr>
<tr>
<td>Who has the name of this shape?</td>
<td>I have □</td>
</tr>
<tr>
<td>Who has the number of corners a triangle has?</td>
<td>I have 3</td>
</tr>
<tr>
<td>Who has an object in the shape of a rectangle?</td>
<td>I have □</td>
</tr>
<tr>
<td>Who has the name of this shape?</td>
<td>I have □</td>
</tr>
<tr>
<td>Who has an object in the shape of a circle?</td>
<td>I have ◊</td>
</tr>
<tr>
<td>Who has the picture of a square?</td>
<td>I have □</td>
</tr>
<tr>
<td>Who has the number of sides of a hexagon?</td>
<td>I have 6</td>
</tr>
<tr>
<td>Who has an object in the shape of a square?</td>
<td>I have □</td>
</tr>
<tr>
<td>Who has the shape a circle?</td>
<td>I have ◊</td>
</tr>
<tr>
<td>Who has an object in the shape of a triangle?</td>
<td>I have △</td>
</tr>
</tbody>
</table>
# Questions and Answers for Math Maze Cards

<table>
<thead>
<tr>
<th>Who has the number for □□□□?</th>
<th>I have 4.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who has the domino for 5?</td>
<td>I have □□</td>
</tr>
<tr>
<td>Who has the number for □□□□?</td>
<td>I have 7.</td>
</tr>
<tr>
<td>Who has the domino for 3?</td>
<td>I have □□</td>
</tr>
<tr>
<td>Who has the number for □□□□?</td>
<td>I have 6.</td>
</tr>
<tr>
<td>Who has the domino for 2?</td>
<td>I have □□</td>
</tr>
<tr>
<td>Who has the number for □□□□?</td>
<td>I have 8.</td>
</tr>
<tr>
<td>Who has the domino for 4?</td>
<td>I have □□</td>
</tr>
<tr>
<td>Who has the number for □□□□?</td>
<td>I have 9.</td>
</tr>
<tr>
<td>Who has the domino for 1?</td>
<td>I have □□</td>
</tr>
<tr>
<td>Who has the number for □□□□?</td>
<td>I have 5.</td>
</tr>
<tr>
<td>Who has the domino for 10?</td>
<td>I have □□□□</td>
</tr>
<tr>
<td>Who has the number for □□□□?</td>
<td>I have 3.</td>
</tr>
<tr>
<td>Who has the domino for 6?</td>
<td>I have □□□□</td>
</tr>
<tr>
<td>Who has the number for □□□□?</td>
<td>I have 10.</td>
</tr>
<tr>
<td>Who has the domino for 8?</td>
<td>I have □□□□</td>
</tr>
<tr>
<td>Who has the number for □□□□?</td>
<td>I have 2.</td>
</tr>
<tr>
<td>Who has the domino for 7?</td>
<td>I have □□□□</td>
</tr>
</tbody>
</table>
Questions and Answers for Math Maze Cards

<table>
<thead>
<tr>
<th>Who has the domino for</th>
<th>I have</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who has the number for 4?</td>
<td>I have 4.</td>
</tr>
<tr>
<td>Who has the domino for</td>
<td>I have 8.</td>
</tr>
<tr>
<td>Who has the ten grid for</td>
<td>I have 5.</td>
</tr>
<tr>
<td>Who has the domino for</td>
<td>I have 6.</td>
</tr>
<tr>
<td>Who has the ten grid for</td>
<td>I have 10.</td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Who has the picture for the third ball?</td>
<td>I have ( \bullet \bullet \bullet \bullet \bullet ).</td>
</tr>
<tr>
<td>Who has the word for this ball?</td>
<td>I have second.</td>
</tr>
<tr>
<td>Who has the short word for this ball?</td>
<td>I have 5th.</td>
</tr>
<tr>
<td>Who has the picture for the first ball?</td>
<td>I have ( \bullet \bullet \bullet \bullet \bullet ).</td>
</tr>
<tr>
<td>Who has the short word for this ball?</td>
<td>I have 3rd.</td>
</tr>
<tr>
<td>Who has the picture for the 5th ball?</td>
<td>I have ( \bullet \bullet \bullet \bullet \bullet ).</td>
</tr>
<tr>
<td>Who has the word for this ball?</td>
<td>I have fourth.</td>
</tr>
<tr>
<td>Who has the short word for this ball?</td>
<td>I have 2nd.</td>
</tr>
<tr>
<td>Who has the picture for the 6th ball?</td>
<td>I have ( \bullet \bullet \bullet \bullet \bullet ).</td>
</tr>
<tr>
<td>Who has the short word for this ball?</td>
<td>I have 1st.</td>
</tr>
<tr>
<td>Who has the word for this ball?</td>
<td>I have sixth.</td>
</tr>
<tr>
<td>Who has the picture for the second ball?</td>
<td>I have ( \bullet \bullet \bullet \bullet \bullet ).</td>
</tr>
<tr>
<td>Who has the word for this ball?</td>
<td>I have first.</td>
</tr>
<tr>
<td>Who has the short word for this ball?</td>
<td>I have 6th.</td>
</tr>
<tr>
<td>Who has the picture for the fourth ball?</td>
<td>I have ( \bullet \bullet \bullet \bullet \bullet ).</td>
</tr>
<tr>
<td>Who has the word for this ball?</td>
<td>I have third.</td>
</tr>
<tr>
<td>Who has the short word for this ball?</td>
<td>I have 4th.</td>
</tr>
</tbody>
</table>
Questions and Answers for Math Maze Cards

<table>
<thead>
<tr>
<th>Who has both numbers for</th>
<th>I have 1 and 4.</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Dice Image]</td>
<td></td>
</tr>
<tr>
<td>Who has both numbers for</td>
<td>I have 3 and 4.</td>
</tr>
<tr>
<td>![Dice Image]</td>
<td></td>
</tr>
<tr>
<td>Who has both numbers for</td>
<td>I have 3 and 3.</td>
</tr>
<tr>
<td>![Dice Image]</td>
<td></td>
</tr>
<tr>
<td>Who has both numbers for</td>
<td>I have 1 and 1.</td>
</tr>
<tr>
<td>![Dice Image]</td>
<td></td>
</tr>
<tr>
<td>Who has both numbers for</td>
<td>I have 3 and 1.</td>
</tr>
<tr>
<td>![Dice Image]</td>
<td></td>
</tr>
<tr>
<td>Who has both numbers for</td>
<td>I have 4 and 4.</td>
</tr>
<tr>
<td>![Dice Image]</td>
<td></td>
</tr>
<tr>
<td>Who has both numbers for</td>
<td>I have 5 and 5.</td>
</tr>
<tr>
<td>![Dice Image]</td>
<td></td>
</tr>
<tr>
<td>Who has both numbers for</td>
<td>I have 2 and 1.</td>
</tr>
<tr>
<td>![Dice Image]</td>
<td></td>
</tr>
<tr>
<td>Who has both numbers for</td>
<td>I have 2 and 4.</td>
</tr>
<tr>
<td>![Dice Image]</td>
<td></td>
</tr>
<tr>
<td>Who has both numbers for</td>
<td>I have 5 and 2.</td>
</tr>
<tr>
<td>![Dice Image]</td>
<td></td>
</tr>
<tr>
<td>Who has both numbers for</td>
<td>I have 2 and 2.</td>
</tr>
<tr>
<td>![Dice Image]</td>
<td></td>
</tr>
<tr>
<td>Who has both numbers for</td>
<td>I have 3 and 5.</td>
</tr>
<tr>
<td>![Dice Image]</td>
<td></td>
</tr>
<tr>
<td>Who has both numbers for</td>
<td>I have 3 and 2.</td>
</tr>
<tr>
<td>![Dice Image]</td>
<td></td>
</tr>
<tr>
<td>Who has both numbers for</td>
<td>I have 2 and 6.</td>
</tr>
<tr>
<td>![Dice Image]</td>
<td></td>
</tr>
<tr>
<td>Who has both numbers for</td>
<td>I have 6 and 4.</td>
</tr>
<tr>
<td>![Dice Image]</td>
<td></td>
</tr>
<tr>
<td>Who has both numbers for</td>
<td>I have 4 and 5.</td>
</tr>
<tr>
<td>![Dice Image]</td>
<td></td>
</tr>
<tr>
<td>Who has both numbers for</td>
<td>I have 3 and 6.</td>
</tr>
<tr>
<td>![Dice Image]</td>
<td></td>
</tr>
<tr>
<td>Who has both numbers for</td>
<td>I have 5 and 1.</td>
</tr>
<tr>
<td>![Dice Image]</td>
<td></td>
</tr>
<tr>
<td>Who has the number for this picture?</td>
<td>I have [__________.]</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>Who has the picture for 15?</td>
<td>I have [_________.]</td>
</tr>
<tr>
<td>Who has the number for this picture?</td>
<td>I have 17.</td>
</tr>
<tr>
<td>Who has the picture for 11?</td>
<td>I have [_________.]</td>
</tr>
<tr>
<td>Who has the number for this picture?</td>
<td>I have 14.</td>
</tr>
<tr>
<td>Who has the picture for 16?</td>
<td>I have [_________.]</td>
</tr>
<tr>
<td>Who has the picture for 12?</td>
<td>I have [_________.]</td>
</tr>
<tr>
<td>Who has the number for this picture?</td>
<td>I have 19.</td>
</tr>
<tr>
<td>Who has the picture for 14?</td>
<td>I have [_________.]</td>
</tr>
<tr>
<td>Who has the number for this picture?</td>
<td>I have 12.</td>
</tr>
<tr>
<td>Who has the picture for 17?</td>
<td>I have [_________.]</td>
</tr>
<tr>
<td>Who has the number for this picture?</td>
<td>I have 15.</td>
</tr>
<tr>
<td>Who has the picture for 18?</td>
<td>I have [_________.]</td>
</tr>
<tr>
<td>Who has the number for this picture?</td>
<td>I have 11.</td>
</tr>
<tr>
<td>Who has the picture for 13?</td>
<td>I have [_________.]</td>
</tr>
<tr>
<td>Who has the number for this picture?</td>
<td>I have 16.</td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Who has a shorter pencil?</td>
<td>I have</td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
</tr>
<tr>
<td>---------------------------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Who has the day after Monday?</td>
<td>I have Tuesday.</td>
</tr>
<tr>
<td>Who has the month after April?</td>
<td>I have May.</td>
</tr>
<tr>
<td>Who has the day before Friday?</td>
<td>I have Thursday.</td>
</tr>
<tr>
<td>Who has the number of days in a week?</td>
<td>I have 7.</td>
</tr>
<tr>
<td>Who has the month after August?</td>
<td>I have September.</td>
</tr>
<tr>
<td>Who has the month before July?</td>
<td>I have June.</td>
</tr>
<tr>
<td>Who has the day after Friday?</td>
<td>I have Saturday.</td>
</tr>
<tr>
<td>Who has the month after October?</td>
<td>I have November.</td>
</tr>
<tr>
<td>Who has the month before March?</td>
<td>I have February.</td>
</tr>
<tr>
<td>Who has the number of months in a year?</td>
<td>I have 12.</td>
</tr>
<tr>
<td>Who has the day before Thursday?</td>
<td>I have Wednesday.</td>
</tr>
<tr>
<td>Who has the month before August?</td>
<td>I have July.</td>
</tr>
<tr>
<td>Who has the day after Sunday?</td>
<td>I have Monday.</td>
</tr>
<tr>
<td>Who has the month before April?</td>
<td>I have March.</td>
</tr>
<tr>
<td>Who has the day before Saturday?</td>
<td>I have Friday.</td>
</tr>
<tr>
<td>Who has the month after September?</td>
<td>I have October.</td>
</tr>
<tr>
<td>Who has the month after December?</td>
<td>I have January.</td>
</tr>
<tr>
<td>Who has the day after Saturday?</td>
<td>I have Sunday.</td>
</tr>
</tbody>
</table>
### Questions and Answers for Math Maze Cards

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who has 1 more than 3 stars?</td>
<td>I have 🌟🌟🌟🌟.</td>
</tr>
<tr>
<td>Who has 1 fewer than 4 dots?</td>
<td>I have ●●●.</td>
</tr>
<tr>
<td>Who has 1 more than 7 stars?</td>
<td>I have 🌟🌟🌟🌟🌟.</td>
</tr>
<tr>
<td>Who has 1 more than 5 dots?</td>
<td>I have ●●●●●.</td>
</tr>
<tr>
<td>Who has 1 fewer than 10 stars?</td>
<td>I have 🌟🌟🌟🌟🌟.</td>
</tr>
<tr>
<td>Who has 1 more than 3 dots?</td>
<td>I have ●●●.</td>
</tr>
<tr>
<td>Who has 1 more than 5 stars?</td>
<td>I have 🌟🌟🌟🌟🌟.</td>
</tr>
<tr>
<td>Who has 1 fewer than 3 stars?</td>
<td>I have 🌟🌟.</td>
</tr>
<tr>
<td>Who has 1 more than 7 dots?</td>
<td>I have ●●●●●.</td>
</tr>
<tr>
<td>Who has 1 fewer than 6 dots?</td>
<td>I have ●●●●●●.</td>
</tr>
<tr>
<td>Who has 1 more than 2 stars?</td>
<td>I have 🌟🌟🌟.</td>
</tr>
<tr>
<td>Who has 1 fewer than 8 dots?</td>
<td>I have ●●●●●●.</td>
</tr>
<tr>
<td>Who has 1 more than 9 dots?</td>
<td>I have ●●●●●●●●.</td>
</tr>
<tr>
<td>Who has 1 fewer than 6 stars?</td>
<td>I have 🌟🌟🌟🌟🌟🌟.</td>
</tr>
<tr>
<td>Who has 1 more than 9 stars?</td>
<td>I have 🌟🌟🌟🌟🌟🌟.</td>
</tr>
<tr>
<td>Who has 1 fewer than 3 dots?</td>
<td>I have ●●●.</td>
</tr>
<tr>
<td>Who has 1 more than 6 stars?</td>
<td>I have 🌟🌟🌟🌟🌟.</td>
</tr>
<tr>
<td>Who has 1 fewer than 2 stars?</td>
<td>I have 🌟.</td>
</tr>
<tr>
<td>Who has the clock for 2:00?</td>
<td>I have ( \begin{array}{c} \text{2:00}\end{array} ).</td>
</tr>
<tr>
<td>Who has the time for ( \begin{array}{c} \text{5:00}\end{array} )?</td>
<td>I have 5:00.</td>
</tr>
<tr>
<td>Who has the clock for 9:00?</td>
<td>I have ( \begin{array}{c} \text{9:00}\end{array} ).</td>
</tr>
<tr>
<td>Who has the time for ( \begin{array}{c} \text{3:00}\end{array} )?</td>
<td>I have 3:00.</td>
</tr>
<tr>
<td>Who has the clock for 6:00?</td>
<td>I have ( \begin{array}{c} \text{6:00}\end{array} ).</td>
</tr>
<tr>
<td>Who has the clock for 1:00?</td>
<td>I have ( \begin{array}{c} \text{1:00}\end{array} ).</td>
</tr>
<tr>
<td>Who has the time for ( \begin{array}{c} \text{8:00}\end{array} )?</td>
<td>I have 8:00.</td>
</tr>
<tr>
<td>Who has the clock for 11:00?</td>
<td>I have ( \begin{array}{c} \text{11:00}\end{array} ).</td>
</tr>
<tr>
<td>Who has the time for ( \begin{array}{c} \text{4:00}\end{array} )?</td>
<td>I have 4:00.</td>
</tr>
<tr>
<td>Who has the clock for 7:00?</td>
<td>I have ( \begin{array}{c} \text{7:00}\end{array} ).</td>
</tr>
<tr>
<td>Who has the clock for 5:00?</td>
<td>I have ( \begin{array}{c} \text{5:00}\end{array} ).</td>
</tr>
<tr>
<td>Who has the time for ( \begin{array}{c} \text{12:00}\end{array} )?</td>
<td>I have 12:00.</td>
</tr>
<tr>
<td>Who has the time for ( \begin{array}{c} \text{7:00}\end{array} )?</td>
<td>I have 7:00.</td>
</tr>
<tr>
<td>Who has the clock for 10:00?</td>
<td>I have ( \begin{array}{c} \text{10:00}\end{array} ).</td>
</tr>
<tr>
<td>Who has the time for ( \begin{array}{c} \text{6:00}\end{array} )?</td>
<td>I have 6:00.</td>
</tr>
<tr>
<td>Who has the time for ( \begin{array}{c} \text{1:00}\end{array} )?</td>
<td>I have 1:00.</td>
</tr>
<tr>
<td>Who has the clock for 12:00?</td>
<td>I have ( \begin{array}{c} \text{12:00}\end{array} ).</td>
</tr>
<tr>
<td>Who has the time for ( \begin{array}{c} \text{9:00}\end{array} )?</td>
<td>I have 9:00.</td>
</tr>
</tbody>
</table>
Questions and Answers for Math Maze Cards

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who has $1 + 2 = \bullet$?</td>
<td>I have 3.</td>
</tr>
<tr>
<td>Who has $3 + 1 = \bullet$?</td>
<td>I have 4.</td>
</tr>
<tr>
<td>Who has $\bullet + \bullet = 2$?</td>
<td>I have 1 + 1.</td>
</tr>
<tr>
<td>Who has $\bullet + \square + \triangle = 4$?</td>
<td>I have 0 + 1 + 3</td>
</tr>
<tr>
<td>Who has $\square + \bullet = 5$?</td>
<td>I have 1 + 4.</td>
</tr>
<tr>
<td>Who has $\square + \bullet = 3$?</td>
<td>I have 1.</td>
</tr>
<tr>
<td>Who has $\bullet + \bullet + \bullet = 3$?</td>
<td>I have 1 + 1 + 1.</td>
</tr>
<tr>
<td>Who has $\bullet + \square = 1$?</td>
<td>I have 1 + 0.</td>
</tr>
<tr>
<td>Who has $3 + \bullet = 5$?</td>
<td>I have 2.</td>
</tr>
<tr>
<td>Who has $\bullet + \bullet + \square = 2$?</td>
<td>I have 1 + 1 + 0.</td>
</tr>
<tr>
<td>Who has $\bullet + \square = 3$?</td>
<td>I have 1 + 2.</td>
</tr>
<tr>
<td>Who has $\bullet + \bullet = 4$?</td>
<td>I have 2 + 2.</td>
</tr>
<tr>
<td>Who has $\bullet + \square = 2$?</td>
<td>I have 2 + 0.</td>
</tr>
<tr>
<td>Who has $\bullet + \square + \square = 4$?</td>
<td>I have 2 + 1 + 1.</td>
</tr>
<tr>
<td>Who has $\square + \triangle = 4$?</td>
<td>I have 3 + 1.</td>
</tr>
<tr>
<td>Who has $3 + \bullet = 3$?</td>
<td>I have 0.</td>
</tr>
<tr>
<td>Who has $\bullet + \square + \triangle = 3$?</td>
<td>I have 0 + 1 + 2.</td>
</tr>
<tr>
<td>Who has $3 + 2 = \bullet$</td>
<td>I have 5.</td>
</tr>
</tbody>
</table>

Week 14•Activity 67

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who has the next number after 7, 8, 9?</td>
<td>I have 10.</td>
</tr>
<tr>
<td>Who has the next number after 4, 5, 6?</td>
<td>I have 7.</td>
</tr>
<tr>
<td>Who has the next number after 12, 13, 14?</td>
<td>I have 15.</td>
</tr>
<tr>
<td>Who has the next number after 21, 22, 23?</td>
<td>I have 24.</td>
</tr>
<tr>
<td>Who has the next number after 8, 9, 10?</td>
<td>I have 11.</td>
</tr>
<tr>
<td>Who has the next number after 18, 19, 20?</td>
<td>I have 21.</td>
</tr>
<tr>
<td>Who has the next number after 6, 7, 8?</td>
<td>I have 9.</td>
</tr>
<tr>
<td>Who has the next number after 17, 18, 19?</td>
<td>I have 20.</td>
</tr>
<tr>
<td>Who has the next number after 19, 20, 21?</td>
<td>I have 22.</td>
</tr>
<tr>
<td>Who has the next number after 27, 28, 29?</td>
<td>I have 30.</td>
</tr>
<tr>
<td>Who has the next number after 25, 26, 27?</td>
<td>I have 28.</td>
</tr>
<tr>
<td>Who has the next number after 20, 21, 22?</td>
<td>I have 23.</td>
</tr>
<tr>
<td>Who has the next number after 15, 16, 17?</td>
<td>I have 18.</td>
</tr>
<tr>
<td>Who has the next number after 10, 11, 12?</td>
<td>I have 13.</td>
</tr>
<tr>
<td>Who has the next number after 23, 24, 25?</td>
<td>I have 26.</td>
</tr>
<tr>
<td>Who has the next number after 16, 17, 18?</td>
<td>I have 19.</td>
</tr>
<tr>
<td>Who has the next number after 14, 15, 16?</td>
<td>I have 17.</td>
</tr>
<tr>
<td>Who has the next number after 26, 27, 28?</td>
<td>I have 29.</td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>Who has (3 + 4 = _?)</td>
<td>I have 7.</td>
</tr>
<tr>
<td>Who has (_ + _ = 6?)</td>
<td>I have 3 + 3.</td>
</tr>
<tr>
<td>Who has (7 + _ = 7?)</td>
<td>I have 0.</td>
</tr>
<tr>
<td>Who has (_ + _ + _ = 6?)</td>
<td>I have 2 + 2 + 2.</td>
</tr>
<tr>
<td>Who has (5 + 1 = _?)</td>
<td>I have 6.</td>
</tr>
<tr>
<td>Who has (_ + _ = 5?)</td>
<td>I have 3 + 2.</td>
</tr>
<tr>
<td>Who has (4 + _ = 5?)</td>
<td>I have 1.</td>
</tr>
<tr>
<td>Who has (_ + _ = 2?)</td>
<td>I have 1 + 1.</td>
</tr>
<tr>
<td>Who has (1 + _ = 3?)</td>
<td>I have 2.</td>
</tr>
<tr>
<td>Who has (_ + _ = 4?)</td>
<td>I have 2 + 2.</td>
</tr>
<tr>
<td>Who has (_ + _ + _ = 7?)</td>
<td>I have 3 + 3 + 1.</td>
</tr>
<tr>
<td>Who has (2 + 3 = _?)</td>
<td>I have 5.</td>
</tr>
<tr>
<td>Who has (_ + _ = 4?)</td>
<td>I have 3 + 1.</td>
</tr>
<tr>
<td>Who has (0 + 4 = _?)</td>
<td>I have 4.</td>
</tr>
<tr>
<td>Who has (_ + _ = 7?)</td>
<td>I have 2 + 5.</td>
</tr>
<tr>
<td>Who has (_ + _ + _ = 7?)</td>
<td>I have 1 + 2 + 4.</td>
</tr>
<tr>
<td>Who has (_ + _ = 6?)</td>
<td>I have 4 + 2.</td>
</tr>
<tr>
<td>Who has (_ + _ + _ = 3?)</td>
<td>I have 1 + 1 + 1.</td>
</tr>
</tbody>
</table>

Afterschool Achievers: Math Club
Questions and Answers for Math Maze Cards

<table>
<thead>
<tr>
<th>Who has the amount for</th>
<th>I have 5¢.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who has the amount for</td>
<td>I have 1¢.</td>
</tr>
<tr>
<td>Who has the amount for</td>
<td>I have 3¢.</td>
</tr>
<tr>
<td>Who has the amount for</td>
<td>I have 6¢.</td>
</tr>
<tr>
<td>Who has the amount for</td>
<td>I have 8¢.</td>
</tr>
<tr>
<td>Who has the amount for</td>
<td>I have 10¢.</td>
</tr>
<tr>
<td>Who has the amount for</td>
<td>I have 11¢.</td>
</tr>
<tr>
<td>Who has the amount for</td>
<td>I have 15¢.</td>
</tr>
<tr>
<td>Who has the amount for</td>
<td>I have 16¢.</td>
</tr>
<tr>
<td>Who has the amount for</td>
<td>I have 7¢.</td>
</tr>
<tr>
<td>Who has the amount for</td>
<td>I have 12¢.</td>
</tr>
<tr>
<td>Who has the amount for</td>
<td>I have 2¢.</td>
</tr>
<tr>
<td>Who has the amount for</td>
<td>I have 13¢.</td>
</tr>
<tr>
<td>Who has the amount for</td>
<td>I have 17¢.</td>
</tr>
<tr>
<td>Who has the amount for</td>
<td>I have 20¢.</td>
</tr>
<tr>
<td>Who has the amount for</td>
<td>I have 4¢.</td>
</tr>
<tr>
<td>Who has the amount for</td>
<td>I have 9¢.</td>
</tr>
<tr>
<td>Who has the amount for</td>
<td>I have 18¢.</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Question</th>
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<tbody>
<tr>
<td>Who has the number after 20?</td>
<td>I have 21.</td>
</tr>
<tr>
<td>Who has the number between 31 and 33?</td>
<td>I have 32.</td>
</tr>
<tr>
<td>Who has the number before 21?</td>
<td>I have 20.</td>
</tr>
<tr>
<td>Who has the number after 26?</td>
<td>I have 27.</td>
</tr>
<tr>
<td>Who has the number between 23 and 25?</td>
<td>I have 24.</td>
</tr>
<tr>
<td>Who has the number before 43?</td>
<td>I have 42.</td>
</tr>
<tr>
<td>Who has the number before 40?</td>
<td>I have 39.</td>
</tr>
<tr>
<td>Who has the number after 30?</td>
<td>I have 31.</td>
</tr>
<tr>
<td>Who has the number between 46 and 48?</td>
<td>I have 47.</td>
</tr>
<tr>
<td>Who has the number before 30?</td>
<td>I have 29.</td>
</tr>
<tr>
<td>Who has the number after 49?</td>
<td>I have 50.</td>
</tr>
<tr>
<td>Who has the number before 20?</td>
<td>I have 19.</td>
</tr>
<tr>
<td>Who has the number between 29 and 31?</td>
<td>I have 30.</td>
</tr>
<tr>
<td>Who has the number after 34?</td>
<td>I have 35.</td>
</tr>
<tr>
<td>Who has the number before 49?</td>
<td>I have 48.</td>
</tr>
<tr>
<td>Who has the number between 39 and 41?</td>
<td>I have 40.</td>
</tr>
<tr>
<td>Who has the number before 35?</td>
<td>I have 34.</td>
</tr>
<tr>
<td>Who has the number before 50?</td>
<td>I have 49.</td>
</tr>
</tbody>
</table>
### Questions and Answers for Math Maze Cards

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who has the name of this solid?</td>
<td>I have cone.</td>
</tr>
<tr>
<td>Who has an object that has the shape of a ball?</td>
<td>I have 🎈</td>
</tr>
<tr>
<td>Who has the picture of a cube shape?</td>
<td>I have 🎀</td>
</tr>
<tr>
<td>Who has the name of this solid?</td>
<td>I have cube.</td>
</tr>
<tr>
<td>Who has the picture of a cone shape?</td>
<td>I have 🟢</td>
</tr>
<tr>
<td>Who has an object that has the shape of a can?</td>
<td>I have 🍼</td>
</tr>
<tr>
<td>Who has the name of this solid?</td>
<td>I have can.</td>
</tr>
<tr>
<td>Who has the number of faces on a cube?</td>
<td>I have 6.</td>
</tr>
<tr>
<td>Who has an object that has the shape of a cone?</td>
<td>I have 🟢</td>
</tr>
<tr>
<td>Who has the picture of a box shape?</td>
<td>I have 🎀</td>
</tr>
<tr>
<td>Who has the name of this solid?</td>
<td>I have ball.</td>
</tr>
<tr>
<td>Who has an object that has the shape of a box?</td>
<td>I have 🎀</td>
</tr>
<tr>
<td>Who has the number of round faces on a can?</td>
<td>I have 2.</td>
</tr>
<tr>
<td>Who has the number of curved edges on a cone?</td>
<td>I have 1.</td>
</tr>
<tr>
<td>Who has an object that has the shape of a cube?</td>
<td>I have 🎀</td>
</tr>
<tr>
<td>Who has the picture of a ball shape?</td>
<td>I have 🎈</td>
</tr>
<tr>
<td>Who has the picture of a can shape?</td>
<td>I have 🍼</td>
</tr>
<tr>
<td>Who has the name of this solid?</td>
<td>I have box.</td>
</tr>
</tbody>
</table>
### Questions and Answers for Math Maze Cards

<table>
<thead>
<tr>
<th>Math Maze Card</th>
<th>I have</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who has $3 + 5$?</td>
<td>$8$.</td>
</tr>
<tr>
<td>Who has $4 + 3$?</td>
<td>$7$.</td>
</tr>
<tr>
<td>Who has $\text{ } + 2 = 6$?</td>
<td>$3 + 3$.</td>
</tr>
<tr>
<td>Who has $8 + 0$?</td>
<td>$0$.</td>
</tr>
<tr>
<td>Who has $\text{ } + 2 = 7$?</td>
<td>$2 + 5$.</td>
</tr>
<tr>
<td>Who has $\text{ } + 3 = 8$?</td>
<td>$5$.</td>
</tr>
<tr>
<td>Who has $\text{ } + 5$?</td>
<td>$2 + 3$.</td>
</tr>
<tr>
<td>Who has $5 + \text{ } = 8$?</td>
<td>$1 + 7$.</td>
</tr>
<tr>
<td>Who has $\text{ } + \text{ } = 4$?</td>
<td>$4 + 0$.</td>
</tr>
<tr>
<td>Who has $\text{ } + \text{ } = 8$?</td>
<td>$4 + 4$.</td>
</tr>
<tr>
<td>Who has $6 + \text{ } = 8$?</td>
<td>$2$.</td>
</tr>
<tr>
<td>Who has $\text{ } + \text{ } + \text{ } = 7$?</td>
<td>$3 + 3 + 1$.</td>
</tr>
<tr>
<td>Who has $4 + \text{ } = 7$?</td>
<td>$3$.</td>
</tr>
<tr>
<td>Who has $7 + \text{ } = 8$?</td>
<td>$1$.</td>
</tr>
<tr>
<td>Who has $\text{ } + \text{ } + \text{ } = 8$?</td>
<td>$2 + 2 + 4$.</td>
</tr>
<tr>
<td>Who has $5 + 1$?</td>
<td>$6$.</td>
</tr>
<tr>
<td>Who has $\text{ } + 3 = 7$?</td>
<td>$4$.</td>
</tr>
<tr>
<td>Who has $\text{ } + \text{ } = 4$?</td>
<td>$2 + 2$.</td>
</tr>
</tbody>
</table>

### Week 20•Activity 97

<table>
<thead>
<tr>
<th>Math Maze Card</th>
<th>I have</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who has the number after 66?</td>
<td>$67$.</td>
</tr>
<tr>
<td>Who has the number before 87?</td>
<td>$86$.</td>
</tr>
<tr>
<td>Who has the number after 69?</td>
<td>$70$.</td>
</tr>
<tr>
<td>Who has the number after 59 and 61?</td>
<td>$60$.</td>
</tr>
<tr>
<td>Who has the number before 70?</td>
<td>$69$.</td>
</tr>
<tr>
<td>Who has the number after 54?</td>
<td>$55$.</td>
</tr>
<tr>
<td>Who has the number between 89 and 91?</td>
<td>$90$.</td>
</tr>
<tr>
<td>Who has the number before 80?</td>
<td>$79$.</td>
</tr>
<tr>
<td>Who has the number after 60?</td>
<td>$61$.</td>
</tr>
<tr>
<td>Who has the number before 60?</td>
<td>$59$.</td>
</tr>
<tr>
<td>Who has the number between 73 and 75?</td>
<td>$74$.</td>
</tr>
<tr>
<td>Who has the number after 90?</td>
<td>$91$.</td>
</tr>
<tr>
<td>Who has the number before 90?</td>
<td>$89$.</td>
</tr>
<tr>
<td>Who has the number between 79 and 81?</td>
<td>$80$.</td>
</tr>
<tr>
<td>Who has the number after 99?</td>
<td>$100$.</td>
</tr>
<tr>
<td>Who has the number before 76?</td>
<td>$75$.</td>
</tr>
<tr>
<td>Who has the number after 80?</td>
<td>$81$.</td>
</tr>
<tr>
<td>Who has the number between 49 and 51?</td>
<td>$50$.</td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Who has the amount for 📌?</td>
<td>I have 5¢.</td>
</tr>
<tr>
<td>Who has the amount for 📌?</td>
<td>I have 1¢.</td>
</tr>
<tr>
<td>Who has the amount for 📌?</td>
<td>I have 10¢.</td>
</tr>
<tr>
<td>Who has the amount for 📌 📌?</td>
<td>I have 12¢.</td>
</tr>
<tr>
<td>Who has the amount for 📌 📌 📌?</td>
<td>I have 21¢.</td>
</tr>
<tr>
<td>Who has the amount for 📌 📌 📌 📌?</td>
<td>I have 7¢.</td>
</tr>
<tr>
<td>Who has the amount for 📌 📌 📌 📌!</td>
<td>I have 11¢.</td>
</tr>
<tr>
<td>Who has the amount for 📌 📌 📌 📌!</td>
<td>I have 16¢.</td>
</tr>
<tr>
<td>Who has the amount for 📌 📌 📌 📌!</td>
<td>I have 20¢.</td>
</tr>
<tr>
<td>Who has the amount for 📌 📌 📌 📌!</td>
<td>I have 25¢.</td>
</tr>
<tr>
<td>Who has the amount for 📌 📌 📌 📌 📌!</td>
<td>I have 26¢.</td>
</tr>
<tr>
<td>Who has the amount for 📌 📌 📌 📌 📌!</td>
<td>I have 23¢.</td>
</tr>
<tr>
<td>Who has the amount for 📌 📌 📌 📌 📌!</td>
<td>I have 22¢.</td>
</tr>
<tr>
<td>Who has the amount for 📌 📌 📌 📌 📌!</td>
<td>I have 19¢.</td>
</tr>
<tr>
<td>Who has the amount for 📌 📌 📌 📌 📌 📌!</td>
<td>I have 24¢.</td>
</tr>
<tr>
<td>Who has the amount for 📌 📌 📌 📌 📌!</td>
<td>I have 18¢.</td>
</tr>
<tr>
<td>Who has the amount for 📌 📌 📌</td>
<td>I have 15¢.</td>
</tr>
<tr>
<td>Who has the amount for 📌 📌 📌 📌 📌 📌</td>
<td>I have 30¢.</td>
</tr>
</tbody>
</table>
### Questions and Answers for Math Maze Cards

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who has $3 + 6$ = $____$?</td>
<td>I have 9.</td>
</tr>
<tr>
<td>Who has $____ + ___ = 9$?</td>
<td>I have 8 + 1.</td>
</tr>
<tr>
<td>Who has $7 + ____ = 9$?</td>
<td>I have 2.</td>
</tr>
<tr>
<td>Who has $____ + ___ = 7$?</td>
<td>I have 3 + 4.</td>
</tr>
<tr>
<td>Who has $____ + ___ = 8$?</td>
<td>I have 4 + 4.</td>
</tr>
<tr>
<td>Who has $6 + ____ = 9$?</td>
<td>I have 3.</td>
</tr>
<tr>
<td>Who has $____ + ___ + ____ = 9$?</td>
<td>I have 3 + 3 + 3.</td>
</tr>
<tr>
<td>Who has $5 + 2 = ____$?</td>
<td>I have 7.</td>
</tr>
<tr>
<td>Who has $9 + ____ = 9$?</td>
<td>I have 0.</td>
</tr>
<tr>
<td>Who has $____ + ___ + ____ = 6$?</td>
<td>I have 2 + 2 + 2.</td>
</tr>
<tr>
<td>Who has $3 + ____ = 8$?</td>
<td>I have 5.</td>
</tr>
<tr>
<td>Who has $5 + 3 = ____$?</td>
<td>I have 8.</td>
</tr>
<tr>
<td>Who has $____ + ___ + ____ = 9$?</td>
<td>I have 2 + 3 + 4.</td>
</tr>
<tr>
<td>Who has $____ + ___ = 6$?</td>
<td>I have 3 + 3.</td>
</tr>
<tr>
<td>Who has $____ + ___ + ____ = 6$?</td>
<td>I have 1 + 2 + 3.</td>
</tr>
<tr>
<td>Who has $5 + ____ = 9$?</td>
<td>I have 4.</td>
</tr>
<tr>
<td>Who has $8 + ____ = 9$?</td>
<td>I have 1.</td>
</tr>
<tr>
<td>Who has $3 + ____ = 9$?</td>
<td>I have 6.</td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Who has the number for 2 tens and 6 ones?</td>
<td>I have 26.</td>
</tr>
<tr>
<td>Who has the picture for 53?</td>
<td>I have 53.</td>
</tr>
<tr>
<td>Who has the number for 7 tens and 4 ones?</td>
<td>I have 74.</td>
</tr>
<tr>
<td>Who has the picture for 80?</td>
<td>I have 80.</td>
</tr>
<tr>
<td>Who has the number for 6 tens and 2 ones?</td>
<td>I have 62.</td>
</tr>
<tr>
<td>Who has the picture for 39?</td>
<td>I have 39.</td>
</tr>
<tr>
<td>Who has the number for 9 tens and 1 one?</td>
<td>I have 91.</td>
</tr>
<tr>
<td>Who has the picture for 47?</td>
<td>I have 47.</td>
</tr>
<tr>
<td>Who has the number for 5 tens?</td>
<td>I have 50.</td>
</tr>
<tr>
<td>Who has the picture for 18?</td>
<td>I have 18.</td>
</tr>
<tr>
<td>Who has the number for 3 tens and 9 ones?</td>
<td>I have 39.</td>
</tr>
<tr>
<td>Who has the picture for 93?</td>
<td>I have 93.</td>
</tr>
<tr>
<td>Who has the number for 1 ten and 9 ones?</td>
<td>I have 19.</td>
</tr>
<tr>
<td>Who has the picture for 65?</td>
<td>I have 65.</td>
</tr>
<tr>
<td>Who has the number for 4 tens and 3 ones?</td>
<td>I have 43.</td>
</tr>
<tr>
<td>Who has the picture for 34?</td>
<td>I have 34.</td>
</tr>
<tr>
<td>Who has the number for 4 tens?</td>
<td>I have 40.</td>
</tr>
<tr>
<td>Who has the picture for 14?</td>
<td>I have 14.</td>
</tr>
</tbody>
</table>
### Questions and Answers for Math Maze Cards

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who has the picture of ( \frac{1}{3} ) of ( \bigcirc )?</td>
<td>I have ( \bigcirc ).</td>
</tr>
<tr>
<td>Who has the picture of ( \frac{1}{2} ) of ( \bigcirc ) ?</td>
<td>I have ( \bigcirc ).</td>
</tr>
<tr>
<td>Who has the picture of ( \frac{1}{4} ) of ( \bigcirc ) ?</td>
<td>I have ( \bigcirc ).</td>
</tr>
<tr>
<td>Who has the fraction for ( \frac{3}{4} )?</td>
<td>I have ( \frac{3}{4} ).</td>
</tr>
<tr>
<td>Who has the picture for ( \frac{1}{2} ) of ( \bigcirc )?</td>
<td>I have ( \bigcirc ).</td>
</tr>
<tr>
<td>Who has the picture for ( \frac{1}{4} ) of ( \bigcirc )?</td>
<td>I have ( \bigcirc ).</td>
</tr>
<tr>
<td>Who has the picture for ( \frac{1}{3} ) of ( \bigcirc )?</td>
<td>I have ( \bigcirc ).</td>
</tr>
<tr>
<td>Who has the picture for ( \frac{1}{2} ) of ( \bigcirc )?</td>
<td>I have ( \bigcirc ).</td>
</tr>
<tr>
<td>Who has the fraction for ( \frac{1}{4} )?</td>
<td>I have ( \frac{1}{4} ).</td>
</tr>
<tr>
<td>Who has the picture for ( \frac{1}{3} ) of ( \bigcirc )?</td>
<td>I have ( \bigcirc ).</td>
</tr>
<tr>
<td>Who has the picture for ( \frac{1}{2} ) of ( \bigcirc )?</td>
<td>I have ( \bigcirc ).</td>
</tr>
<tr>
<td>Who has the picture for ( \frac{1}{4} ) of ( \bigcirc )?</td>
<td>I have ( \bigcirc ).</td>
</tr>
<tr>
<td>Who has the picture for ( \frac{1}{2} ) of ( \bigcirc )?</td>
<td>I have ( \bigcirc ).</td>
</tr>
<tr>
<td>Who has the fraction for ( \frac{1}{2} )?</td>
<td>I have ( \frac{1}{2} ).</td>
</tr>
<tr>
<td>Who has the picture for ( \frac{1}{2} ) of ( \bigcirc )?</td>
<td>I have ( \bigcirc ).</td>
</tr>
<tr>
<td>Who has the picture for ( \frac{1}{4} ) of ( \bigcirc )?</td>
<td>I have ( \bigcirc ).</td>
</tr>
<tr>
<td>Who has the picture for ( \frac{1}{2} ) of ( \bigcirc )?</td>
<td>I have ( \bigcirc ).</td>
</tr>
<tr>
<td>Who has the picture for ( \frac{1}{2} ) of ( \bigcirc )?</td>
<td>I have ( \bigcirc ).</td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Who has $4 + 6 = ____?$</td>
<td>I have 10.</td>
</tr>
<tr>
<td>Who has $7 + 2 = ____?$</td>
<td>I have 9.</td>
</tr>
<tr>
<td>Who has $____ + ____ = 10?$</td>
<td>I have $5 + 5$.</td>
</tr>
<tr>
<td>Who has $9 - 5 = ____?$</td>
<td>I have 4.</td>
</tr>
<tr>
<td>Who has $10 - 3 = ____?$</td>
<td>I have 7.</td>
</tr>
<tr>
<td>Who has $____ + ____ = 6?$</td>
<td>I have $3 + 3$.</td>
</tr>
<tr>
<td>Who has $10 - ____ = 8?$</td>
<td>I have 2.</td>
</tr>
<tr>
<td>Who has $9 + ____ = 10?$</td>
<td>I have 1.</td>
</tr>
<tr>
<td>Who has $____ + ____ = 8?$</td>
<td>I have $4 + 4$.</td>
</tr>
<tr>
<td>Who has $3 + ____ = 8?$</td>
<td>I have 5.</td>
</tr>
<tr>
<td>Who has $9 - 6 = ____?$</td>
<td>I have 3.</td>
</tr>
<tr>
<td>Who has $10 - 2 = ____?$</td>
<td>I have 8.</td>
</tr>
<tr>
<td>Who has $9 - 9 = ____?$</td>
<td>I have 0.</td>
</tr>
<tr>
<td>Who has $____ - ____ = 3?$</td>
<td>I have $10 - 7$.</td>
</tr>
<tr>
<td>Who has $4 + ____ = 10?$</td>
<td>I have 6.</td>
</tr>
<tr>
<td>Who has $____ - ____ = 0?$</td>
<td>I have $8 - 8$.</td>
</tr>
<tr>
<td>Who has $____ + ____ + ____ = 9?$</td>
<td>I have $3 + 3 + 3$.</td>
</tr>
<tr>
<td>Who has $____ + ____ + ____ = 10?$</td>
<td>I have $4 + 4 + 2$.</td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Who has a tool to tell time with numbers?</td>
<td>I have ☑.</td>
</tr>
<tr>
<td>Who has a tool to compare two weights?</td>
<td>I have ☑.</td>
</tr>
<tr>
<td>Who has a tool to show the date?</td>
<td>I have ☑.</td>
</tr>
<tr>
<td>Who has a tool to tell time with hands?</td>
<td>I have ☑.</td>
</tr>
<tr>
<td>Who has a tool to measure how long?</td>
<td>I have ☑.</td>
</tr>
<tr>
<td>Who has a tool to measure how hot?</td>
<td>I have ☑.</td>
</tr>
<tr>
<td>Who has a tool to measure how heavy?</td>
<td>I have ☑.</td>
</tr>
<tr>
<td>Who has a tool to measure how full?</td>
<td>I have ☑.</td>
</tr>
<tr>
<td>Who has a unit of time?</td>
<td>I have hour.</td>
</tr>
<tr>
<td>Who has a unit of length?</td>
<td>I have inch.</td>
</tr>
<tr>
<td>Who has a unit of weight?</td>
<td>I have pound.</td>
</tr>
<tr>
<td>Who has the taller one, 🔱 or 🔱?</td>
<td>I have 🔱.</td>
</tr>
<tr>
<td>Who has the heavier one, 🔱 or 🔱?</td>
<td>I have 🔱.</td>
</tr>
<tr>
<td>Who has the longer one, 🔱 or 🔱?</td>
<td>I have 🔱.</td>
</tr>
<tr>
<td>Who has the colder one, 🔱 or 🔱?</td>
<td>I have 🔱.</td>
</tr>
<tr>
<td>Who has the shorter one, 🔱 or 🔱?</td>
<td>I have 🔱.</td>
</tr>
<tr>
<td>Who has the lighter one, 🔱 or 🔱?</td>
<td>I have 🔱.</td>
</tr>
<tr>
<td>Who has the one that holds more, ☑ or ☑?</td>
<td>I have ☑.</td>
</tr>
</tbody>
</table>
### Questions and Answers for Math Maze Cards

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who has the name of this shape?</td>
<td>I have square.</td>
</tr>
<tr>
<td>Who has a picture of a triangle?</td>
<td>I have △.</td>
</tr>
<tr>
<td>Who has an object that looks like a circle?</td>
<td>I have ⌚.</td>
</tr>
<tr>
<td>Who has the name of this shape?</td>
<td>I have cube.</td>
</tr>
<tr>
<td>Who has a picture of a circle?</td>
<td>I have ⌂.</td>
</tr>
<tr>
<td>Who has an object that has the shape of a can?</td>
<td>I have ✈.</td>
</tr>
<tr>
<td>Who has the name of this shape?</td>
<td>I have cone.</td>
</tr>
<tr>
<td>Who has a picture of a ball shape?</td>
<td>I have ⚽.</td>
</tr>
<tr>
<td>Who has an object that has the shape of a cube?</td>
<td>I have 🎁.</td>
</tr>
<tr>
<td>Who has the name of this shape?</td>
<td>I have circle.</td>
</tr>
<tr>
<td>Who has a picture of a cylinder?</td>
<td>I have 🍺.</td>
</tr>
<tr>
<td>Who has an object that looks like a rectangle?</td>
<td>I have 📕.</td>
</tr>
<tr>
<td>Who has the name of this shape?</td>
<td>I have triangle.</td>
</tr>
<tr>
<td>Who has a picture of a box shape?</td>
<td>I have 🏠.</td>
</tr>
<tr>
<td>Who has the name of this shape?</td>
<td>I have 📚.</td>
</tr>
<tr>
<td>Who has a picture of a cube shape?</td>
<td>I have 🛠️.</td>
</tr>
<tr>
<td>Who has an object that looks like a triangle?</td>
<td>I have 🍏.</td>
</tr>
<tr>
<td>Who has an object that has the shape of a cone and a ball?</td>
<td>I have 🍩.</td>
</tr>
</tbody>
</table>
### Math Maze

#### Questions and Answers for Math Maze Cards

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who has $11 - 9 =$?</td>
<td>I have 2.</td>
</tr>
<tr>
<td>Who has $3 + 8 =$?</td>
<td>I have 11.</td>
</tr>
<tr>
<td>Who has $11 - 4 =$?</td>
<td>I have 7.</td>
</tr>
<tr>
<td>Who has $6 + 4 =$?</td>
<td>I have 10.</td>
</tr>
<tr>
<td>Who has $10 - 9 =$?</td>
<td>I have 1.</td>
</tr>
<tr>
<td>Who has $11 - 2 =$?</td>
<td>I have 9.</td>
</tr>
<tr>
<td>Who has $11 - 7 =$?</td>
<td>I have 4.</td>
</tr>
<tr>
<td>Who has $3 +$? = 11?</td>
<td>I have 8.</td>
</tr>
<tr>
<td>Who has $9 +$? = 9?</td>
<td>I have 0.</td>
</tr>
<tr>
<td>Who has $+$ + $+$ = 10?</td>
<td>I have 5 + 5.</td>
</tr>
<tr>
<td>Who has $6 +$? = 11?</td>
<td>I have 5.</td>
</tr>
<tr>
<td>Who has $11 - 8 =$?</td>
<td>I have 3.</td>
</tr>
<tr>
<td>Who has $11 - 5 =$?</td>
<td>I have 6.</td>
</tr>
<tr>
<td>Who has $+$ + $+$ = 8?</td>
<td>I have 4 + 4.</td>
</tr>
<tr>
<td>Who has $+$ + $+$ + $+$ = 11?</td>
<td>I have 5 + 5 + 1.</td>
</tr>
<tr>
<td>Who has $+$ + $+$ + $+$ = 9?</td>
<td>I have 3 + 3 + 3.</td>
</tr>
<tr>
<td>Who has $+$ + $+$ + $+$ = 11?</td>
<td>I have 6 + 4 + 1.</td>
</tr>
<tr>
<td>Who has $+$ + $+$ = 6?</td>
<td>I have 3 + 3.</td>
</tr>
</tbody>
</table>

### Week 28 Activity 137

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who has $12 - 3 =$?</td>
<td>I have 9.</td>
</tr>
<tr>
<td>Who has $7 +$? = 12?</td>
<td>I have 5.</td>
</tr>
<tr>
<td>Who has $8 + 4 =$?</td>
<td>I have 12.</td>
</tr>
<tr>
<td>Who has $8 - 8 =$?</td>
<td>I have 0.</td>
</tr>
<tr>
<td>Who has $4 + 7 =$?</td>
<td>I have 11.</td>
</tr>
<tr>
<td>Who has $12 - 5 =$?</td>
<td>I have 7.</td>
</tr>
<tr>
<td>Who has $+$ + $+$ = 12?</td>
<td>I have 6 + 6.</td>
</tr>
<tr>
<td>Who has $12 - 8 =$?</td>
<td>I have 4.</td>
</tr>
<tr>
<td>Who has $+$ + $+$ = 10?</td>
<td>I have 5 + 5.</td>
</tr>
<tr>
<td>Who has $+$ + $+$ = 12?</td>
<td>I have 8.</td>
</tr>
<tr>
<td>Who has $4 +$? = 12?</td>
<td>I have 3.</td>
</tr>
<tr>
<td>Who has $+$ + $+$ = 6?</td>
<td>I have 6.</td>
</tr>
<tr>
<td>Who has $+$ + $+$ = 12?</td>
<td>I have 10.</td>
</tr>
<tr>
<td>Who has $+$ + $+$ = 9?</td>
<td>I have 2.</td>
</tr>
<tr>
<td>Who has $+$ + $+$ + $+$ = 9?</td>
<td>I have 1.</td>
</tr>
<tr>
<td>Who has $+$ + $+$ + $+$ = 6?</td>
<td>I have 2 + 2 + 2.</td>
</tr>
<tr>
<td>Who has $+$ + $+$ + $+$ = 12?</td>
<td>I have 4 + 4 + 4.</td>
</tr>
</tbody>
</table>
## Questions and Answers for Math Maze Cards

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who has the clock for 2:00?</td>
<td>I have ![2:00 image]</td>
</tr>
<tr>
<td>Who has the time for ![3:00 image]?</td>
<td>I have 5:30.</td>
</tr>
<tr>
<td>Who has the clock for 9:30?</td>
<td>I have ![9:30 image]</td>
</tr>
<tr>
<td>Who has the time for ![2:00 image]?</td>
<td>I have 3:00.</td>
</tr>
<tr>
<td>Who has the clock for 6:00?</td>
<td>I have ![6:00 image]</td>
</tr>
<tr>
<td>Who has the clock for 1:30?</td>
<td>I have ![1:30 image]</td>
</tr>
<tr>
<td>Who has the time for ![8:30 image]?</td>
<td>I have 8:30.</td>
</tr>
<tr>
<td>Who has the clock for 11:00?</td>
<td>I have ![11:00 image]</td>
</tr>
<tr>
<td>Who has the time for ![4:00 image]?</td>
<td>I have 4:00.</td>
</tr>
<tr>
<td>Who has the clock for 7:30?</td>
<td>I have ![7:30 image]</td>
</tr>
<tr>
<td>Who has the clock for 5:30?</td>
<td>I have ![5:30 image]</td>
</tr>
<tr>
<td>Who has the time for ![12:00 image]?</td>
<td>I have 12:00.</td>
</tr>
<tr>
<td>Who has the time for ![7:00 image]?</td>
<td>I have 7:00.</td>
</tr>
<tr>
<td>Who has the clock for 10:30?</td>
<td>I have ![10:30 image]</td>
</tr>
<tr>
<td>Who has the time for ![6:30 image]?</td>
<td>I have 6:30.</td>
</tr>
<tr>
<td>Who has the time for ![1:00 image]?</td>
<td>I have 1:00.</td>
</tr>
<tr>
<td>Who has the clock for 12:30?</td>
<td>I have ![12:30 image]</td>
</tr>
<tr>
<td>Who has the time for ![9:00 image]?</td>
<td>I have 9:00.</td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Who has 1¢?</td>
<td>I have 🅱️.</td>
</tr>
<tr>
<td>Who has 5¢?</td>
<td>I have 🅱️.</td>
</tr>
<tr>
<td>Who has 10¢?</td>
<td>I have 🅱️.</td>
</tr>
<tr>
<td>Who has 25¢?</td>
<td>I have 🅱️.</td>
</tr>
<tr>
<td>Who has 7¢?</td>
<td>I have 🅱️.</td>
</tr>
<tr>
<td>Who has 11¢?</td>
<td>I have 🅱️.</td>
</tr>
<tr>
<td>Who has 26¢?</td>
<td>I have 🅱️.</td>
</tr>
<tr>
<td>Who has 15¢?</td>
<td>I have 🅱️.</td>
</tr>
<tr>
<td>Who has 20¢?</td>
<td>I have 🅱️.</td>
</tr>
<tr>
<td>Who has 30¢?</td>
<td>I have 🅱️.</td>
</tr>
<tr>
<td>Who has 50¢?</td>
<td>I have 🅱️.</td>
</tr>
<tr>
<td>Who has 35¢?</td>
<td>I have 🅱️.</td>
</tr>
<tr>
<td>Who has 40¢?</td>
<td>I have 🅱️.</td>
</tr>
<tr>
<td>Who has 17¢?</td>
<td>I have 🅱️.</td>
</tr>
<tr>
<td>Who has 22¢?</td>
<td>I have 🅱️.</td>
</tr>
<tr>
<td>Who has 36¢?</td>
<td>I have 🅱️.</td>
</tr>
<tr>
<td>Who has 21¢?</td>
<td>I have 🅱️.</td>
</tr>
<tr>
<td>Who has 41¢?</td>
<td>I have 🅱️.</td>
</tr>
</tbody>
</table>
**Math Maze**

**Week 32 • Activity 157**

**Questions and Answers for Math Maze Cards**

| Who has the number that is greater, 23 or 32? | I have 32. |
| Who has the number that is less, 40 or 24? | I have 24. |
| Who has the number that is greater, 27 or 30? | I have 30. |
| Who has the number that is less, 43 or 34? | I have 34. |
| Who has the number that is greater, 50 or 35? | I have 50. |
| Who has the number that is less, 29 or 27? | I have 27. |
| Who has the number that is greater, 36 or 56? | I have 56. |
| Who has the number that is greater, 41 or 29? | I have 41. |
| Who has the number that is less, 35 or 52? | I have 35. |
| Who has the number that is less, 62 or 26? | I have 26. |
| Who has the number that is greater, 80 or 39? | I have 80. |
| Who has the number that is less, 56 or 49? | I have 49. |
| Who has the number that is greater, 90 or 60? | I have 90. |
| Who has the number that is less, 45 or 39? | I have 39. |
| Who has the number that is less, 66 or 63? | I have 63. |
| Who has the number that is greater, 71 or 17? | I have 71. |
| Who has the number that is greater, 59 or 50? | I have 59. |
| Who has the number that is less, 45 or 53? | I have 45. |

**Week 33 • Activity 162**

| Who has the sum for 20 + 30? | I have 50. |
| Who has the addition fact to help find 20 + 30? | I have 2 + 3 = 5. |
| Who has the sum for 40 + 50? | I have 90. |
| Who has the addition fact to help find 40 + 50? | I have 4 + 5 = 9. |
| Who has the sum for 70 + 10? | I have 80. |
| Who has the sum for 20 + 40? | I have 60. |
| Who has the addition fact to help find 70 + 10? | I have 7 + 1 = 8. |
| Who has the sum for 40 + 30? | I have 70. |
| Who has the sum for 10 + 10? | I have 20. |
| Who has the addition fact to help find 40 + 30? | I have 4 + 3 = 7. |
| Who has the sum for 50 + 50? | I have 100. |
| Who has the addition fact to help find 20 + 40? | I have 2 + 4 = 6. |
| Who has the sum for 20 + 20? | I have 40. |
| Who has the addition fact to help find 50 + 30? | I have 5 + 3 = 8. |
| Who has the sum for 20 + 10? | I have 30. |
| Who has the addition fact to help find 40 + 10? | I have 4 + 1 = 5. |
| Who has the sum for 10 + 0? | I have 10. |
| Who has the addition fact to help find 50 + 50? | I have 5 + 5 = 10. |
### Questions and Answers for Math Maze Cards

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who has the sum for $5 + 8$?</td>
<td>I have 13.</td>
</tr>
<tr>
<td>Who has the sum for $4 + 7$?</td>
<td>I have 11.</td>
</tr>
<tr>
<td>Who has the difference for $12 - 7$?</td>
<td>I have 5.</td>
</tr>
<tr>
<td>Who has the difference for $10 - 3$?</td>
<td>I have 7.</td>
</tr>
<tr>
<td>Who has the sum for $9 + 6$?</td>
<td>I have 15.</td>
</tr>
<tr>
<td>Who has the difference for $14 - 5$?</td>
<td>I have 9.</td>
</tr>
<tr>
<td>Who has the sum for $3 + 9$?</td>
<td>I have 12.</td>
</tr>
<tr>
<td>Who has the difference for $14 - 8$?</td>
<td>I have 6.</td>
</tr>
<tr>
<td>Who has the difference for $11 - 9$?</td>
<td>I have 2.</td>
</tr>
<tr>
<td>Who has the sum for $6 + 4$?</td>
<td>I have 10.</td>
</tr>
<tr>
<td>Who has the difference for $13 - 9$?</td>
<td>I have 4.</td>
</tr>
<tr>
<td>Who has the difference for $15 - 7$?</td>
<td>I have 8.</td>
</tr>
<tr>
<td>Who has the difference for $9 - 9$?</td>
<td>I have 0.</td>
</tr>
<tr>
<td>Who has the sum for $5 + 9$?</td>
<td>I have 14.</td>
</tr>
<tr>
<td>Who has the difference for $12 - 9$?</td>
<td>I have 3.</td>
</tr>
<tr>
<td>Who has the difference for $10 - 9$?</td>
<td>I have 1.</td>
</tr>
<tr>
<td>Who has a double with the sum of 14?</td>
<td>I have $7 + 7$.</td>
</tr>
<tr>
<td>Who has a double with the sum of 12?</td>
<td>I have $6 + 6$.</td>
</tr>
</tbody>
</table>
### Questions and Answers for Math Maze Cards

<p>| Who has the next number after 5, 10, 15, 20? | I have 25. |
| Who has the next number after 20, 30, 40, 50? | I have 60. |
| Who has the next number after 8, 10, 12, 14? | I have 16. |
| Who has the next number after 30, 35, 40, 45? | I have 50. |
| Who has the next number after 24, 26, 28, 30? | I have 32. |
| Who has the next number after 50, 60, 70, 80? | I have 90. |
| Who has the next number after 32, 34, 36, 38? | I have 40. |
| Who has the next number after 65, 70, 75, 80? | I have 85. |
| Who has the next number after 12, 14, 16, 18? | I have 20. |
| Who has the next number after 35, 40, 45, 50? | I have 55. |
| Who has the next number after 28, 30, 32, 34? | I have 36. |
| Who has the missing number for 24, __, 28, 30? | I have 26. |
| Who has the missing number for 35, 40, __, 50? | I have 45. |
| Who has the missing number for 10, 20, __, 40? | I have 30. |
| Who has the missing number for 66, 68, __, 72? | I have 70. |
| Who has the missing number for 70, 75, __, 85? | I have 80. |
| Who has the missing number for 60, 62, __, 66? | I have 64. |
| Who has the missing number for 40, __, 44, 46? | I have 42. |</p>
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who has the sum for $7 + 8$?</td>
<td>I have 15.</td>
</tr>
<tr>
<td>Who has the difference for $11 - 7$?</td>
<td>I have 4.</td>
</tr>
<tr>
<td>Who has the sum for $9 + 9$?</td>
<td>I have 18.</td>
</tr>
<tr>
<td>Who has the difference for $14 - 9$?</td>
<td>I have 5.</td>
</tr>
<tr>
<td>Who has the sum for $7 + 9$?</td>
<td>I have 16.</td>
</tr>
<tr>
<td>Who has the sum for $5 + 7$?</td>
<td>I have 12.</td>
</tr>
<tr>
<td>Who has the difference for $11 - 9$?</td>
<td>I have 2.</td>
</tr>
<tr>
<td>Who has the sum for $7 + 3$?</td>
<td>I have 10.</td>
</tr>
<tr>
<td>Who has the sum for $9 + 8$?</td>
<td>I have 17.</td>
</tr>
<tr>
<td>Who has the difference for $12 - 9$?</td>
<td>I have 3.</td>
</tr>
<tr>
<td>Who has the sum for $9 + 5$?</td>
<td>I have 14.</td>
</tr>
<tr>
<td>Who has the difference for $17 - 9$?</td>
<td>I have 8.</td>
</tr>
<tr>
<td>Who has the sum for $5 + 8$?</td>
<td>I have 13.</td>
</tr>
<tr>
<td>Who has the difference for $10 - 9$?</td>
<td>I have 1.</td>
</tr>
<tr>
<td>Who has the difference for $15 - 8$?</td>
<td>I have 7.</td>
</tr>
<tr>
<td>Who has the sum for $8 + 3$?</td>
<td>I have 11.</td>
</tr>
<tr>
<td>Who has the difference for $15 - 6$?</td>
<td>I have 9.</td>
</tr>
<tr>
<td>Who has the difference for $14 - 8$?</td>
<td>I have 6.</td>
</tr>
</tbody>
</table>
Note: The instructor may need to read each question aloud as the children work through the test.

Activity Correlation

<table>
<thead>
<tr>
<th>Concepts (and diagnostic item numbers)</th>
<th>Activity Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counting and enumerating up to ten (1–5, 7–10)</td>
<td>2, 4, 5, 14, 17, 19, 22, 25, 28, 32, 44, 49, 65, 85, 154</td>
</tr>
<tr>
<td>Match equal amounts, more and fewer (3)</td>
<td>7, 9, 52</td>
</tr>
<tr>
<td>Even and odd numbers (6)</td>
<td>113, 121, 174, 179</td>
</tr>
<tr>
<td>Place value (11–15)</td>
<td>112, 123, 126, 138, 157, 165, 168</td>
</tr>
<tr>
<td>Counting beyond ten (16)</td>
<td>37, 67, 68, 82, 83, 97, 105, 108</td>
</tr>
<tr>
<td>Ordinal numbers (17)</td>
<td>27, 45</td>
</tr>
<tr>
<td>Fractions (18)</td>
<td>117, 118, 173</td>
</tr>
</tbody>
</table>
### Basic Operations

**Diagnostic Test #2**

1. Loop the apples to make a group of 5 apples. Answers may vary.

2. Loop the balls to make a group of 9 balls. Answers may vary.

Add dots to the domino to make ten dots altogether.

3. 

4. 

5. Loop the domino that shows 8 dots altogether.

6. Loop the domino that shows 16 dots altogether.

Write the answer.

7. $1 + 2 = 3$

8. $3 + 2 = 5$

9. $3 + 0 = 3$

10. $6 + 1 = 7$

11. $3 + 4 = 7$

12. $5 + 5 = 10$

13. $7 - 1 = 6$

14. $10 - 2 = 8$

15. $8 - 2 = 6$

### Activity Correlation

<table>
<thead>
<tr>
<th>Concepts (and diagnostic item numbers)</th>
<th>Activity Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count mixed coins up to $0.50 (16, 17, 18)</td>
<td>29, 34, 39, 64, 77, 79, 94, 102, 109, 124, 139, 149, 152, 155, 164, 169</td>
</tr>
<tr>
<td>Use addition symbol (7–12, 19–23)</td>
<td>10</td>
</tr>
<tr>
<td>Word problems (23, 24)</td>
<td>70, 90</td>
</tr>
<tr>
<td>Add multiples of 10 (21, 22)</td>
<td>164</td>
</tr>
</tbody>
</table>

**Note:** The instructor may need to read each question aloud as the children work through the test.

### Write how much money.

<table>
<thead>
<tr>
<th>16.</th>
<th>17.</th>
<th>18.</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Image]</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
<tr>
<td>$3c$</td>
<td>$6c$</td>
<td>$13c$</td>
</tr>
</tbody>
</table>

### Fill in the blanks.

19. $4 + 1 = 5$

20. $3 + 2 = 5$

21. $40 + 10 = 50$

22. $30 + 20 = 50$

23. Three cats are in a basket. One cat leaves. How many cats are still in the basket?

3

24. Four children are at the playground. Two more children come to play. How many children are at the playground now?

6
Look at the letters in the box.

1. Write the letter that is between the T and the B.  D
2. Write the letter that is under the T.  C
3. Write the letter that is above the T.  F
4. Loop all the shapes that have 4 sides.
5. Cross out the shape that does not belong.
6. Loop the square.
7. Loop the triangle.

Draw a line to match the shapes to the pictures.
8.  
9.  
10.  
11.  

Name: 
Date: 

Note: The instructor may need to read each question aloud as the children work through the test.

Mark the correct answer.

12. One shape is different. Cross out the shape that does not belong.
13. Loop all the shapes that roll. Put an X on all the shapes that do not roll.
14. Loop the shapes that can be stacked. Put an X on all the shapes that cannot be stacked.
15. On this graph, which one is the favorite dessert? Loop your answer.

Favorite Deserts

- apple
- cookies
- ice cream cone

Activity Correlation

<table>
<thead>
<tr>
<th>Concepts (and diagnostic item numbers)</th>
<th>Activity Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over, under, between (1, 2, 3)</td>
<td>20, 40,</td>
</tr>
<tr>
<td>Identify two-dimensional shapes and attributes (4–11)</td>
<td>3, 8, 12, 13, 18, 21, 23, 60, 80, 100, 132, 153</td>
</tr>
<tr>
<td>Basic shapes in everyday objects (8–11)</td>
<td>12, 87, 100, 132</td>
</tr>
<tr>
<td>Identify three-dimensional shapes (12)</td>
<td>87, 120, 132, 140</td>
</tr>
<tr>
<td>Attributes of three-dimensional shapes (13, 14)</td>
<td>48, 53, 58, 63, 158, 160, 180</td>
</tr>
<tr>
<td>Graphs (15)</td>
<td>163</td>
</tr>
</tbody>
</table>

Grade 1
Activity Correlation

<table>
<thead>
<tr>
<th>Concepts (and diagnostic item numbers)</th>
<th>Activity Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length (1, 10)</td>
<td>38, 42, 115, 133</td>
</tr>
<tr>
<td>Weight (2)</td>
<td>15, 33, 55, 95</td>
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<tr>
<td>Capacity (3)</td>
<td>35, 42, 43</td>
</tr>
<tr>
<td>Volume (size) (4)</td>
<td>6, 42</td>
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<tr>
<td>Time to whole and half hour (5)</td>
<td>57, 135, 147, 148, 175</td>
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<tr>
<td>Days of the week, months of the year (6, 7)</td>
<td>47, 93, 98</td>
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<tr>
<td>Money (8, 9)</td>
<td>73, 75, 77, 78, 102, 128, 152, 155</td>
</tr>
<tr>
<td>Measurement tools (10, 11)</td>
<td>88, 103, 127, 143, 178</td>
</tr>
</tbody>
</table>
Note: The instructor may need to read each question aloud as the children work through the test.

Fill in the blanks to complete the patterns.

8. 10, 20, 30, 40, 50, 60, 70, 80
9. 17, 27, 37, 47, 57, 67, 77

10. □ + 3 = 3
What number is the □? Loop the best answer. 0 1 2

11. ○ + ○ = 10
What number is the ○? Loop the best answer. 0 3 5

Activity Correlation

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<th>Concepts (and diagnostic item numbers)</th>
<th>Activity Numbers</th>
</tr>
</thead>
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<tr>
<td>Extend a linear pattern (3, 4)</td>
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<td>Even numbers, multiples of five and ten; skip counting (8, 9)</td>
<td>111, 116, 121, 125, 136, 141, 145, 146, 156, 161, 172, 176</td>
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<tr>
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<td>62, 72, 92, 107, 122, 137, 142</td>
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