

Name \_\_\_\_\_ Date \_\_\_\_\_



### Skills Maintenance

#### Solving Equations

#### Activity 1

Solve the equations using the properties and rules you know. Check the answer when you are done by substituting the value for the variable in the original equation.

<b>Model</b>	$x - 9 = 15$ <p>Solve:</p> $x + -9 = 15$ $x + -9 + 9 = 15 + 9$ $x + 0 = 24$ $x = \underline{24}$ <p>Check:</p> $24 - 9 = 15$ $15 = 15 \text{ TRUE}$
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1.  $x + 7 = 24$

Solve:

$x =$  \_\_\_\_\_

Check:

2.  $w - 3 = -2$

Solve:

$w =$  \_\_\_\_\_

Check:

3.  $-3z = 24$

Solve:

$z =$  \_\_\_\_\_

Check:

4.  $4y = 36$

Solve:

$y =$  \_\_\_\_\_

Check:

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**Apply Skills****Thinking About Algebraic Equations****Activity 1**

Look at the pairs of equations. There is a slight difference in each of them. Circle the part that is different.

**Model**

$$3x + 2 - 3(+5) = 10$$

$$3x + 2 - 3(-5) = 10$$

- |   |   |
|---|---|
| <p>1. <math>x + 2 + -3 + 5 = 20</math><br/><math>x + 2 + 3 + 5 = 20</math></p> <p>3. <math>3x - 9 + 2 = 35</math><br/><math>-3x - 9 + 2 = 35</math></p> | <p>2. <math>24 = 3x + 5 - -3 - x</math><br/><math>24 = 3x + 5 - -3 + x</math></p> <p>4. <math>-17 = -x - 3 - 5 - -2</math><br/><math>-17 = -x - 3 + 5 - -2</math></p> |
|---|---|

**Activity 2**

Each of the pairs of equations is slightly different. Solve each equation and be ready to compare and discuss the answers.

1.  $3x - x + 2x = 8$  and  $-3x - x + 2x = 8$   
Show your work here:
2.  $-5 + x - 7 = 24$  and  $5 + x - 7 = 24$   
Show your work here:
3.  $-17 + x + 17 + -1 = 2$  and  $-17 + x + 17 + 1 = 2$   
Show your work here:

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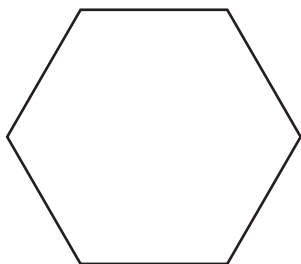


### Problem-Solving Activity

#### Interior Angle Measurement of Regular Polygons

Use the pattern in the *Table of Measures for Regular Polygons* in the *Student Text* to solve the problems. In some cases, you will have to draw triangles in the shape in order to find out how many there are. Then write three equations for each shape.

1. Hexagon



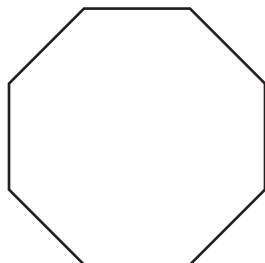
Three algebraic equations for a hexagon

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2. Octagon



Three algebraic equations for an octagon

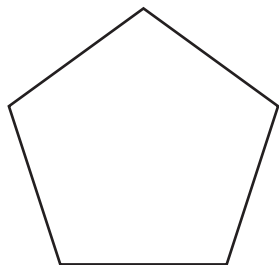
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3. Pentagon



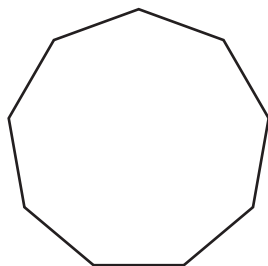
Three algebraic equations for a pentagon

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4. Nonagon



Three algebraic equations for a nonagon

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