Name _____ Date _____

Skills Maintenance
Variables and Substitution

Activity 1

Substitute a value for the variable that makes the statement true.

1. $30 \cdot w = 90$ $w =$ _____

2. $120 - z = 40$ $z =$ _____

3. $m + 30 = 50$ $m =$ _____

4. $80 \div 4 = x$ $x =$ _____

5. $y = 12.7 - 2.5$ $y =$ _____

6. $12.5 \cdot u = 12.5$ $u =$ _____

Activity 2

Substitute the values for the variables in the formulas and solve.

1. Area of a triangle $= \frac{1}{2} \cdot b \cdot h$

   What is the area of a triangle with a base of 5 and a height of 6?

   _____

2. Area of a parallelogram $= b \cdot h$

   What is the base of a parallelogram with an area of 48 and a height of 6?

   _____

3. Circumference of a circle $= 2 \cdot \pi \cdot r$. (Remember, we round pi to 3.14.)

   What is the circumference of a circle with a radius of 2?

   _____

Name _____ Date _____

Apply Skills
Proportions

Activity 1

Look at the proportions with missing parts. Analyze the numbers to find the multiplication pattern. Then find the value of the variable.
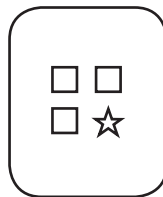
1. $\frac{4}{5} = \frac{x}{20}$ $x =$ _____

2. $\frac{1}{4} = \frac{4}{y}$ $y =$ _____

3. $\frac{w}{9} = \frac{3}{27}$ $w =$ _____

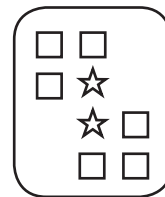**4.** $\frac{2}{3} = \frac{14}{z}$ $z =$ _____

Activity 2

Select the two cards that are proportional, then write the proportion.

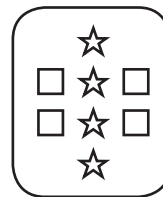**1.** Which two cards are proportional?
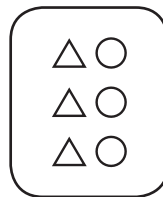(Circle the two cards)
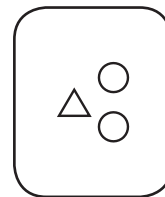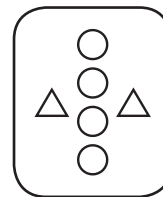
Write the proportion: _____ = _____

Card 1   Card 2   Card 3

2. Which two cards are proportional?
(Circle the two cards)

Write the proportion: _____ = _____

Card 1   Card 2   Card 3
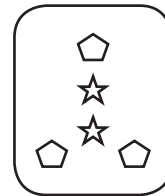
3. Which two cards are proportional?
(Circle the two cards)

Write the proportion: _____ = _____

Card 1   Card 2   Card 3

Name _____ Date _____

Problem-Solving Activity
Solving Word Problems Using Proportions

Solve the problems by setting up a proportion.

1. Blake is painting his house a shade of green. The paint is 2 parts green paint to 1 part white paint. How much white paint will he need to add to 12 cans of green paint?

   _____

2. Tyrone needs to increase the recipe on the back of the pancake box. The recipe calls for 1 cup mix and 2 cups water. If he uses 8 cups of mix, how much water will he need?

   _____

3. Elyse and Sam are building a bridge for their physics class. They need 2 bottles of craft glue for every 60 wood sticks they put together. They have a box of 360 wood sticks. How many bottles of glue will they need?

   _____

4. When you dye eggs, you need 2 tablespoons of vinegar and 3 cups of water for each color tablet. Suppose you are mixing the dye for 6 different color tablets. How much vinegar will you need? How much water?

   _____

mBook Reinforce Understanding
Use the **mBook** *Study Guide* to review lesson concepts.