

Name _____ Date _____



Skills Maintenance
Variables and Proportions

Activity 1

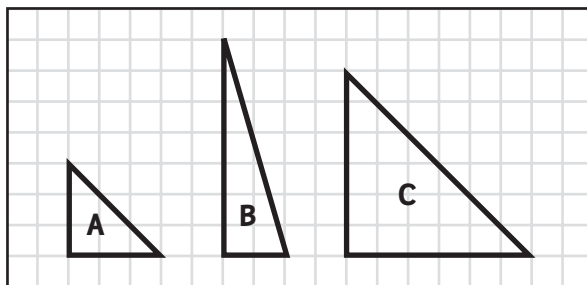
Convert the percents to decimal numbers.

- | | |
|--------------|--------------|
| 1. 75% _____ | 2. 4% _____ |
| 3. 16% _____ | 4. 55% _____ |
| 5. 2% _____ | 6. 85% _____ |

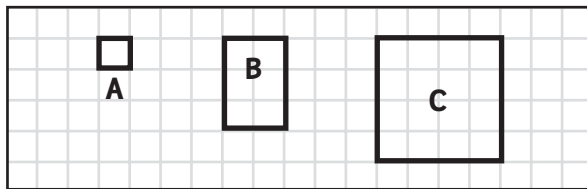
Activity 2

For each group of shapes, select the two that are similar.

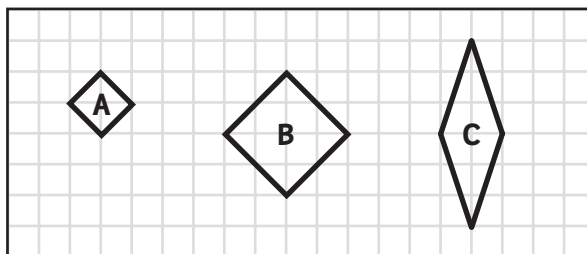
1. Which shapes are similar?
- (a) A and B
 - (b) A and C
 - (c) B and C



2. Which shapes are similar?
- (a) A and B
 - (b) A and C
 - (c) B and C



3. Which shapes are similar?
- (a) A and B
 - (b) A and C
 - (c) B and C



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Problem-Solving Activity

Translating Percent Problems

Solve the percent problems by substituting the value for the variables. You may use a calculator.

1. What is the discount on a \$500 TV that is 15% off? Answer _____

$D = \text{discount}, p = \text{percent off}, c = \text{cost}$

$$\begin{array}{ccccccc} D & = & p & \cdot & c \\ \downarrow & & \downarrow & & \downarrow \\ \underline{\hspace{1cm}} & = & \underline{\hspace{1cm}} & \cdot & \underline{\hspace{1cm}} \end{array}$$

2. What is the tax on a \$300 item at a tax rate of 7%? Answer _____

$T = \text{tax amount}, r = \text{tax rate}, c = \text{cost}$

$$\begin{array}{ccccccc} T & = & r & \cdot & c \\ \downarrow & & \downarrow & & \downarrow \\ \underline{\hspace{1cm}} & = & \underline{\hspace{1cm}} & \cdot & \underline{\hspace{1cm}} \end{array}$$

3. What is a 15% tip on a \$100 meal at a restaurant? Answer _____

$T = \text{tip}, r = \text{percent}, c = \text{cost of meal}$

$$\begin{array}{ccccccc} T & = & r & \cdot & c \\ \downarrow & & \downarrow & & \downarrow \\ \underline{\hspace{1cm}} & = & \underline{\hspace{1cm}} & \cdot & \underline{\hspace{1cm}} \end{array}$$

4. How much interest will you earn on \$1,500 at 2%? Answer _____

$I = \text{interest}, r = \text{rate}, a = \text{account balance}$

$$\begin{array}{ccccccc} T & = & r & \cdot & c \\ \downarrow & & \downarrow & & \downarrow \\ \underline{\hspace{1cm}} & = & \underline{\hspace{1cm}} & \cdot & \underline{\hspace{1cm}} \end{array}$$

5. What is the discount on a \$250 item at 20% off? Answer _____

$D = \text{discount}, p = \text{percent off}, c = \text{cost}$


$$\begin{array}{ccccccc} D & = & p & \cdot & c \\ \downarrow & & \downarrow & & \downarrow \\ \underline{\hspace{1cm}} & = & \underline{\hspace{1cm}} & \cdot & \underline{\hspace{1cm}} \end{array}$$

6. How much tax will you pay for a \$75 item at a 6% rate. Answer _____

$T = \text{tax}, r = \text{tax rate}, c = \text{cost}$

$$\begin{array}{ccccccc} T & = & r & \cdot & c \\ \downarrow & & \downarrow & & \downarrow \\ \underline{\hspace{1cm}} & = & \underline{\hspace{1cm}} & \cdot & \underline{\hspace{1cm}} \end{array}$$

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 **Problem-Solving Activity**
Translating Percent Problems

Solve the percent problems. Remember to convert the percent to a decimal number before you multiply. You may use a calculator.

1. Everything in a department store is on sale for 10% off. Write an equation to describe the discount on a \$500 digital camera.

2. Roseanne has a coupon for 5% off her monthly phone bill. Write an equation to describe the discount on her \$175 bill.

3. The teacher promised the class bonus points for the semester. She would give each student a bonus of 10% of the total homework points for the semester. Write an equation that describes how many bonus points Bonnie will get if she earned 150 homework points during the semester.

4. The New Jax Band is donating 1% of all ticket sales from a concert tour to charity. Write an equation that describes how much they will donate to the charity if they sell \$1,500 in tickets.

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