

Name _____ Date _____

**Skills Maintenance****Solving Proportions****Activity 1**

Use cross multiplication to solve the proportions.

Model

$$\frac{4}{x} = \frac{2}{4}$$
$$2x = 16$$
$$x = \underline{\quad 8 \quad}$$

1. $\frac{3}{4} = \frac{12}{w}$ $w = \underline{\hspace{2cm}}$

Show your work here:

2. $\frac{5}{x} = \frac{15}{18}$ $x = \underline{\hspace{2cm}}$

Show your work here:

3. $\frac{z}{8} = \frac{27}{72}$ $z = \underline{\hspace{2cm}}$

Show your work here:



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Apply Skills

Rate Problems and Algebra

Activity 1

Write a proportion to represent each of the rate problems. Use cross multiplication to solve the proportions. Be sure you are answering the question the problem asks.

1. If it takes Jonah 15 minutes to run a mile, how long will it take him to run 3 miles at the same rate?

Write the proportion. _____

Solve the proportion. _____

What is the answer to the problem?

2. If it takes Becca 10 minutes to read one page of her book, how long will it take her to read 5 pages at the same rate?

Write the proportion. _____

Solve the proportion. _____

What is the answer to the problem?

3. If Eli can earn 100 points in 5 minutes on his video game, how many points can he earn in 20 minutes at the same rate?

Write the proportion. _____

Solve the proportion. _____

What is the answer to the problem?

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4. Marshall's Shipping Service moves goods up and down the East Coast. Their truck drivers work at night when there are fewer people on the freeway. Bill usually drives at 65 miles per hour, and he drives for 6 hours before he stops. How far does he drive before he stops?

Write the proportion. _____

Solve the proportion. _____

What is the answer to the problem? _____

5. One night Juanita was driving from New York to Boston when she ran into bad weather. She averaged 50 miles per hour and she stopped for coffee and something to eat after 250 miles. How long did she drive?

Write the proportion. _____

Solve the proportion. _____

What is the answer to the problem?: _____

6. Marshall's also uses trains to ship goods long distances. Trains average a slower speed than trucks. They average 50 miles per hour, but trains don't stop as often as trucks. The train to Pittsburgh goes 12 hours before it stops. How many miles does it travel?

Write the proportion. _____

Solve the proportion. _____

What is the answer to the problem?: _____

7. When a train goes through the mountains, the speed drops even further. It can take 10 hours to go 300 miles. What is the rate of speed?

Write the proportion: _____

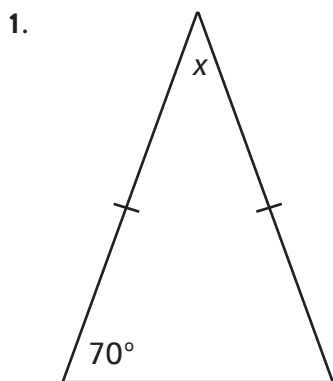
Solve the proportion: _____

What is the answer to the problem?: _____

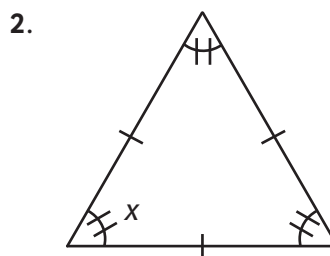
Name _____ Date _____

 **Problem-Solving Activity**
Triangles With Congruent Angles

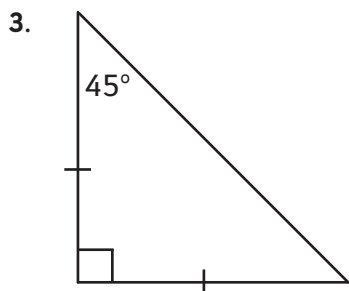
Look at the triangles. Decide if they have congruent sides or angles. Use algebraic expressions to find the measurements of all the angles.



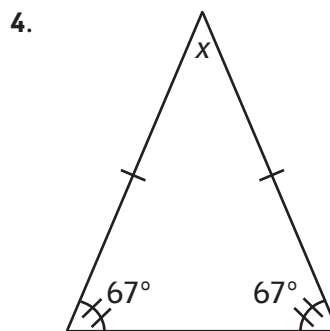
Algebraic expression:



Algebraic expression:



Algebraic expression:



Algebraic expression:
