

Math 8th Grade - Review1 Proportions**Multiple Choice**

Identify the choice that best completes the statement or answers the question.

- _____ 1. A local Chinese restaurant sells combination meals for \$9.50 a piece. If the cost of an order is proportional to the number of meals ordered, how much is the delivery charge?
- a. \$2 per order
b. \$2 per meal
c. \$3 for the first and \$2 for each additional meal
d. \$3 per order
- _____ 2. Darron uses a family recipe to make hamburgers. If he plans on using $1\frac{1}{3}$ cups of bread crumbs, about how many pounds of hamburger does Darron need to use to keep the relationship between bread crumbs and hamburger proportional?

Bread Crumbs (c)	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$
Hamburger (lb)	1	2	3

- a. $5\frac{1}{3}$ pounds
b. 5 pounds
c. $4\frac{1}{3}$ pounds
d. 4 pounds

Solve each proportion.

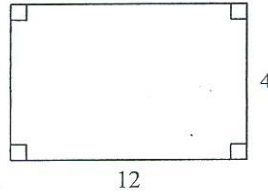
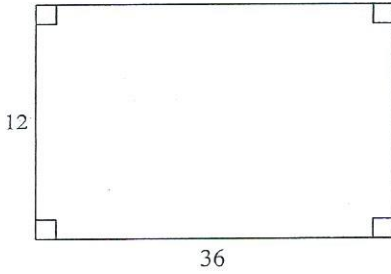
- _____ 3. $\frac{m}{9} = \frac{24}{36}$
- a. 9
b. 13.5
c. 6
d. 4

Solve using the draw-a-diagram strategy.

- _____ 4. A sink is being filled with water. After 15 seconds the sink is $\frac{1}{4}$ full. How much longer will it take to fill the sink if the water rate is constant?
- a. 30 seconds
b. 45 seconds
c. 1 minute
d. 1 minute 15 seconds

Determine whether each pair of polygons is similar.

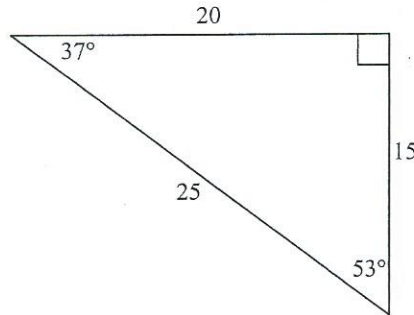
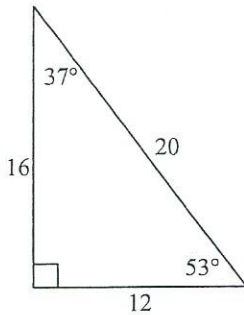
_____ 5.



a. yes

b. no

_____ 6.



a. yes

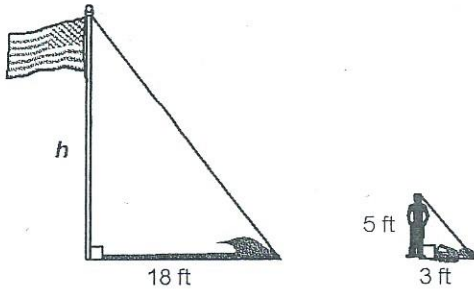
b. no

Solve.

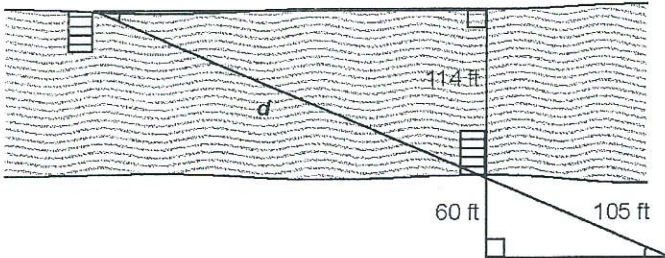
- _____ 7. A model of an airplane is 8 inches long. If the actual airplane is 32 feet, find the scale of the model.
- a. 4 in. = 1 ft c. 1:4
b. 8:1 d. 1 in. = 4 ft
- _____ 8. Coach Henderson is drawing a scale model of a basketball court on a chalkboard so he can diagram plays during timeouts. The court is 94 feet long and 50 feet wide. If the model of the basketball court is 5 inches wide, how long is the model?
- a. 12.1 in. c. 9.4 in.
b. 2.7 in. d. 7.8 in.
- _____ 9. A map has a scale of 2 centimeters = 15 kilometers. If the distance between two cities on the map is 9 centimeters, what is the actual distance between the cities?
- a. 67.5 km c. 54.3 km
b. 16.5 km d. 1.2 km
- _____ 10. An architect's blueprint for a house shows the master bedroom being 4.5 inches wide. If the scale used to create the blueprint is 0.25 in. = 1 ft, what is the actual width of the master bedroom?
- a. 14.5 ft c. 4.5 ft
b. 21.8 ft d. 18 ft

The triangles shown are similar. Write a proportion to solve the problem. Round to the nearest tenth, if necessary.

- ____ 11. What is the height of the flagpole?



- a. 10.8 ft
b. 30 ft
c. 37.9 ft
d. 81 ft
- ____ 12. What is the distance between the two docks?



- a. 199.5 ft
b. 48.2 ft
c. 153.6 ft
d. 65.1 ft

Write a proportion to determine the missing measure. Round to the nearest tenth, if necessary.

- ____ 13. A lighthouse casts a 72-yard shadow at the same time as a 32-foot tall billboard casts a 19-foot shadow. What is the height of the lighthouse?
- a. 121.3 yd
b. 64.8 yd
c. 42.8 yd
d. 118.4 ft

Short Answer

In Exercises 11-14, assume the situations are proportional.

14. Elsie pays \$8.99 for a one-pound canister of Georgia pecans. Write and solve a proportion to determine the cost of 4 ounces of the pecans she needs for a particular recipe. (Round answer to the nearest cent.)

Name: _____

ID: A

15. In Hilliard School there are 650 students. Of the 650 students, there are 400 students who play at least one sport. Write and solve a proportion to determine how many students in a class of 30 students would play at least one sport. (Round answer to the nearest whole number.)