

Name: _____

Period: _____

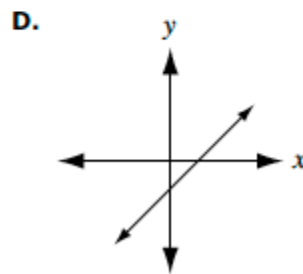
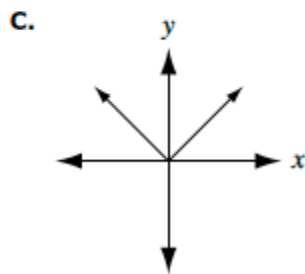
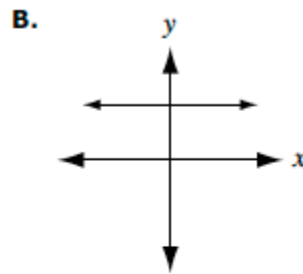
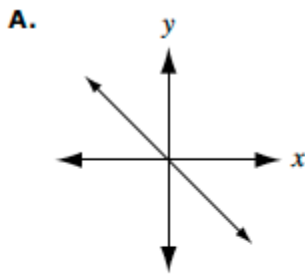
Math 7: MCA 3 Practice - Proportions

Directions: Read each question carefully. Show your work or explain your answer for each problem.

1. A florist sells 8 roses for a total of \$10. Each rose costs the same amount. What is the cost of 12 roses?
A. \$9.60
B. \$10.40
C. \$14.00
D. \$15.00

2. A chef has a frying pan that weighs $1\frac{1}{2}$ pounds. Which of the following is closest to the weight, in kilograms, of the frying pan? (1 pound \approx 0.454 kilogram)
A. 0.303 kilogram
B. 0.681 kilogram
C. 0.954 kilogram
D. 1.046 kilogram

3. Which represents a proportional relationship?



4. Which represents a proportional relationship? Explain your answer.

A. $np = 5$

B. $n = \frac{4}{p}$

C. $n = 2$

D. $\frac{n}{p} = 3$

5. Create a table of values to identify which equations represent a proportional relationship.

A. $y = 3x - 1$

x	y

Proportional? _____

B. $y = \frac{x}{2}$

x	y

Proportional? _____

6. Donnie has a spool that contains 18 yards of wire. What is the total number of inches of wire that the spool contains? (Hint: 1 yard = 36 inches)

A. 162

B. 216

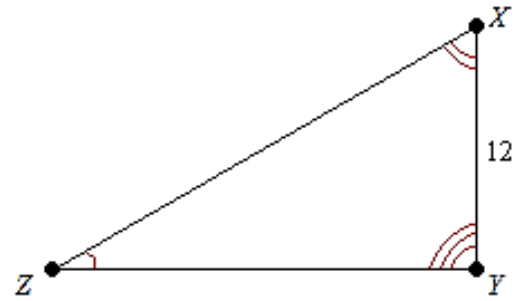
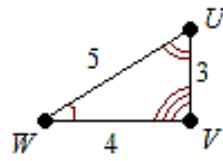
C. 540

D. 648

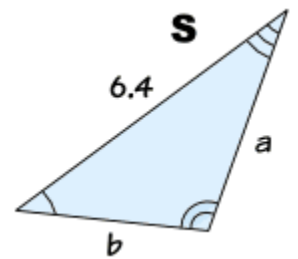
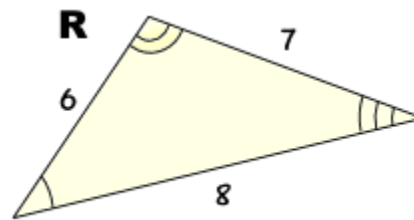
7. Solve the proportion using cross products.

$$\frac{8}{15} = \frac{18.4}{x}$$

8. Find the length of ZX and YZ



9. Find the value of a and b



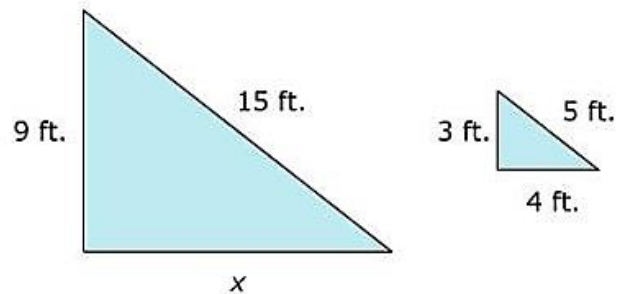
10. Joan is 5 feet tall and casts a shadow 12 feet long. The tree she is standing next to casts a shadow of 128.4 feet long. How tall is the tree? (HINT: Draw a picture)

11. $\triangle EFG$ is similar to $\triangle JKL$. $\triangle JKL$ is similar to $\triangle QRS$. Which statement must be true?

- A. $\triangle EFG$ is congruent to $\triangle QRS$
- B. $\triangle EFG$ is similar to $\triangle QRS$
- C. $\triangle EFG$ is a reflection of $\triangle QRS$
- D. There is no relationship between $\triangle EFG$ and $\triangle QRS$

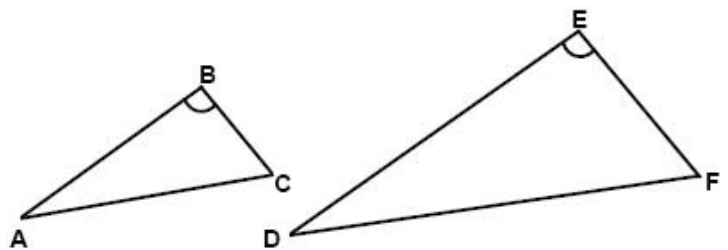
12. The triangles shown are similar. What is the value of x ?

- A. 8 ft.
- B. 10 ft.
- C. 12 ft.
- D. 14 ft.



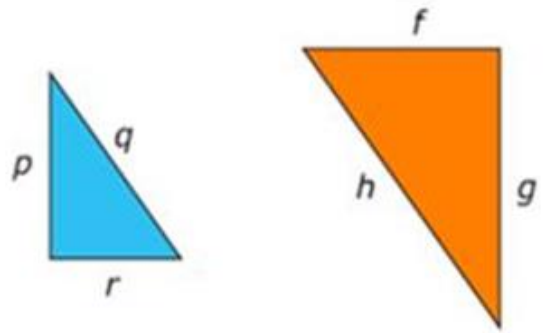
13. $\triangle ABC \sim \triangle DEF$. If the angle measure of B is 80 degrees. What is the angle measure of E ?

- A. 40 degrees
- B. 80 degrees
- C. 100 degrees
- D. 160 degrees



14. The two figures shown are similar. Make a proportion to show the relationship between the lengths of the sides.

_____ = _____

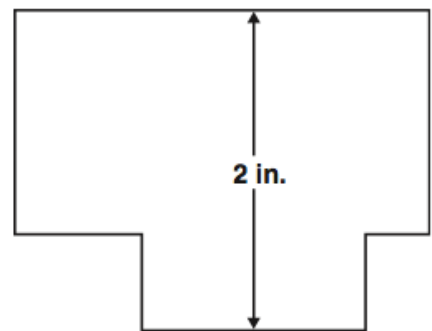


15. A map uses the scale 1.5 cm = 30 miles. The cities of Pineview and Oakwood are 90 miles apart. How far apart are Pineview and Oakwood **on the map**?

- A. 3.15 cm
- B. 31.5 cm
- C. 4.5 cm
- D. 45.0 cm

16. Mr. Craig made a scale drawing of his office. The width of the scale drawing of the office is 2 inches. What is the actual width, in feet of Mr. Craig's office?

- A. 3 feet
- B. 6 feet
- C. 9 feet
- D. 12 feet



$\frac{1}{2}$ inch = 3 feet

17. Anne and Linda are using different road maps of the city. On Anne's map a road 3 inches long is really 15 miles long. On Linda's map a road 9 inches long is really 45 miles long. Who is using the larger city map?
- A. Anne
 - B. Linda
 - C. their maps are the same
 - D. not enough information to tell
18. A quality inspector examines a sample of 25 strings of lights and finds that 6 strings of lights are defective. What is the best prediction of the number of defective strings in a delivery of 1000 strings of lights?
- a. 6 lights
 - b. 24 lights
 - c. 25 lights
 - d. 240 lights