

Write the letter for the correct answer in the blank at the right of each question.

1. Express 6 cups to 5 quarts as a fraction in simplest form.

A $\frac{6}{5}$

B $\frac{3}{5}$

C $\frac{3}{10}$

D $\frac{6}{20}$

$\frac{6}{5}$ can't simplify

2. Express the ratio 6 feet to 3 yards as a fraction in simplest form.

F 2

G $\frac{3}{2}$

H $\frac{2}{3}$

J $\frac{1}{9}$

$\frac{6 \text{ ft}}{3 \text{ yds}} = \frac{2 \text{ ft}}{1 \text{ yd}}$

3. Express 325 miles every 5 hours as a unit rate.

A 1625 mi/h

B 65 mi/h

C 55 mi/h

D 6.5 mi/h

$\frac{325 \text{ mi}}{5 \text{ h}} \div 5 = \frac{65}{1 \text{ h}}$

4. Which of the following has the same unit rate as 8 books in 12 weeks?

~~F~~ 2 books in 1 week

~~G~~ 5 books in 7 weeks

$\frac{5 \text{ b}}{7 \text{ w}} \div 7 = \frac{.71}{1}$

~~H~~ 6 books in 15 weeks

J 3 books in 4.5 weeks

$\frac{8 \text{ books}}{12 \text{ w}} \div 12 = \frac{0.67}{1 \text{ w}}$

5. Ms. Epps can run 15 laps in 22 minutes. How many laps can she run in 10 minutes?

A 6 laps

B 7 laps

C 7 laps

D 6.8 laps

$\frac{15 \text{ laps}}{22 \text{ min}} = \frac{x}{10 \text{ min}}$

6. Which of the following shows the correct metric approximation for 7 feet?

F 2.1 meters

G 4.3 meters

H 21.3 meters

J 23 meters

(Hint: 1 meter = 3.28 feet)

$\frac{3.28 \text{ ft}}{1 \text{ m}} = \frac{7 \text{ ft}}{x \text{ m}}$

$\frac{3.28x}{3.28} = \frac{7}{3.28}$ $x = 2.13$

$\frac{150}{22} = \frac{22x}{22}$ $x = 6.8$

7. An athlete runs 5 miles in $1\frac{1}{4}$ hours. If the distance covered is proportional to the time spent running, which of the following is not an equivalent rate?

$\frac{3 \text{ mi}}{0.75 \text{ h}} = \frac{4 \text{ mi}}{1 \text{ hr}}$

~~A~~ 3 miles in $\frac{3}{4}$ hour

C 7 miles in $1\frac{3}{4}$ hours

B 2 miles in $\frac{1}{4}$ hour

~~D~~ 4 miles in 1 hour

$\frac{5 \text{ mi}}{1\frac{1}{4} \text{ h}} \div \frac{1}{4} = \frac{4 \text{ mi}}{1 \text{ hr}}$

$\frac{7 \text{ mi}}{1.75 \text{ h}} = \frac{4 \text{ mi}}{1 \text{ hr}}$

$\frac{2 \text{ mi}}{0.75 \text{ hr}} = \frac{8 \text{ mi}}{1 \text{ hr}}$

8. A map has a scale of 1 inch = 75 miles. How many inches on the map would represent 300 miles?

F 2 inches

G 3 inches

H 4 inches

J 5 inches

$\frac{1 \text{ in}}{75 \text{ mi}} = \frac{x}{300 \text{ mi}}$ $\frac{0.333 \text{ in}}{25 \text{ mi}} = \frac{x}{300 \text{ mi}}$ $x = 4$

9. What value of x makes $\frac{x}{3} = \frac{1.2}{4}$ a proportion?

A 14.4

B 10

C 1.6

D 0.9

$\frac{4x}{4} = \frac{3.6}{4}$

10. A chili recipe calls for 6 pounds of ground beef for 25 servings. How many pounds are needed for 30 servings?

F 5

G 7.2

H 8

J 15

$\frac{6 \text{ lb}}{25 \text{ serv.}} = \frac{x}{30 \text{ serv.}}$

11. At the grocery store, 3 cans of tuna fish are on sale for \$1.08. Which equation could be used to find the total cost c if a customer wants to buy 7 cans of tuna?

A $c = 7 \cdot 1.08$

B $c = 3 \cdot 0.36$

C $c = 7 \cdot 0.36$

D $c = 7 \cdot 3.24$

$\frac{\$1.08}{3} = \frac{\$0.36}{1 \text{ can}}$

$\frac{180}{25} = \frac{25x}{25}$ 7.2

12. Audrey used a scale of 1 inch = 5 feet to construct a scale model of the school gymnasium. A basketball hoop in the model has a height of 2 inches. What is the actual height of the basketball hoop?

F 2.5 feet

G 7 feet

H 10 feet

J 15 feet

$\frac{1 \text{ in}}{5 \text{ ft}} = \frac{2 \text{ in}}{x}$

13. Suppose a model of a commercial airplane is 11.5 inches long. The actual length of the airplane is 230 feet long. What is the scale of the model?

A 1 ft = 20 in.

B 20 in. = 20 ft

C 1 in. = 20 ft

D 20 in. = 230 ft

$\frac{11.5 \text{ in}}{230 \text{ ft}} \div 11.5 = \frac{1 \text{ in}}{20 \text{ ft}}$