MODULE G: RATIOS AND RATES

Write the following as simplified ratios:

1. 8 to 10

2. 3.2 to 2.4

3. 6 1/2 feet to 10 inches

4. 12 oz. to 18 oz

5. 7 dimes to 3 quarters.

6. A basketball player made 42 of the 70 shots taken in a tournament. Write the ratio of shots made to shots taken.

Write the following as a unit rate. Round your answer to the nearest hundredth when appropriate.

7. $10.36 for 12 ounces

8. 300 miles in 5 hr 30 min

9. $\frac{480 \text{ mi.}}{15 \text{ gal}}$

10. $\frac{657{,}200 \text{ library books}}{5{,}200 \text{ students}}$

11. A printer produces 4 pages in 6 seconds. How many pages are produced per second?

12. Find the unit price: $10.44 for 18 bottles of water

13. Find the best buy for dishwashing liquid:
    a. 12 oz. for 79¢
    b. 22 oz. for $1.29

MODULE G: PROPORTIONS

1. What is a proportion? How can you tell if something is a proportion?

2. Write the following as a proportion:

15 is to 21 as 60 is to 84

7. Which of the following are proportions?

A. $\frac{2.4}{1.2} = \frac{2}{1}$

B. $\frac{9}{10} = \frac{23.8}{26}$

C. $\frac{5}{8} = \frac{75}{120}$

D. $\frac{3}{\frac{1}{5}} = \frac{30}{6}$

8. Solve each of the following:

A. $\frac{7}{12} = \frac{\boldsymbol{m}}{24}$

B. $\frac{\boldsymbol{y}}{12} = \frac{5}{0.6}$

C. $\frac{x+2}{x-1} = \frac{3}{4}$

MODULE G: WORD PROBLEMS plus Review of Previous Modules

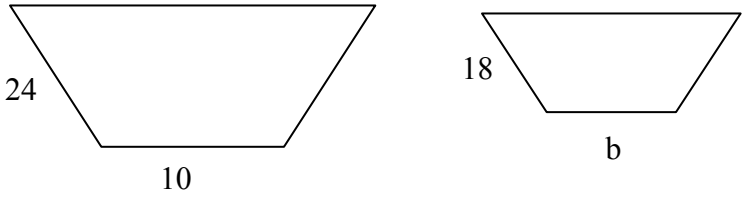
1. A recipe that calls for 1 1/3 cups of sugar makes 24 cookies. How much sugar should be used in the recipe if you want to make 100 cookies?

2. John drives 300 miles in 4 hours 40 min. At this rate, how long will it take him to drive 500 miles?

3. The Changs purchased an $80,000 home, and the property taxes were $1,400. If they make improvements and the house is now valued at $120,000, what will the new property tax be?

4. A 6-lb. roast will serve 14 people. What size roast is needed to serve 21 people?

5. Find the missing side length in the similar trapezoids below.



Review from previous modules:

6. Evaluate: A) $\left(-\frac{3}{4}+0.3\right)^2$ B) $-0.2^2-3\left(\frac{1}{8}+\frac{3}{2}\right)$

7. Evaluate $3a^2-2b$ if $a=-\frac{1}{2}$ and $b=-\frac{1}{8}$

8. Translate into English phrases. Let x = "a number"

A. x^2-4 B. $\frac{5}{x-1}$

9. Solve :

A. $\frac{1}{3}x-\frac{3}{8}=\frac{1}{6}x-\frac{3}{4}$ B. $-3(x-9)+2=3(7-x)$