

## LESSON 7 - PRACTICE PROBLEMS

1. Write each ratio in simplest form.

a. 3 to 7

b. 4:12

c.  $\frac{12 \text{ inches}}{24 \text{ inches}}$

d. 14 to 42

e.  $\frac{16}{42}$

2. Write each rate in simplest form.

a. 30 miles in 4 hours

b. 24 inches to 4 feet

c. 12 boys to 18 girls

d. 18 cars to 32 bicycles

e. 15 men to 35 women

3. Write the unit rate for each of the following. Round to two decimals.

a. 150 miles in 3 hours

b. 24 inches to 2 feet

c. \$18.25 for 4 gallons

d. \$1.45 for 6 ounces

e. 74 pounds per 12 square inches

4. Solve each of the following proportion problems for the given variable.

Round to two decimals as needed.

a.  $\frac{x}{2} = \frac{12}{4}$

b.  $\frac{r}{5} = \frac{6}{3}$

c.  $\frac{10}{6} = \frac{x}{12}$

d.  $\frac{1.5}{3} = \frac{t}{6}$

e.  $\frac{x}{2.4} = \frac{3.8}{3.04}$

5. Solve each of the following proportion problems for the given variable.  
Round to two decimals as needed.

a.  $\frac{3}{x} = \frac{2}{4}$

b.  $\frac{3}{r} = \frac{3}{6}$

c.  $\frac{6}{10} = \frac{12}{x}$

d.  $\frac{7}{3} = \frac{14}{t}$

e.  $\frac{2.5}{x} = \frac{4}{8}$

6. Solve each of the following proportion problems for the given variable.  
Round to two decimals as needed.

a.  $\frac{x}{2} = 6$

b.  $t = \frac{8}{4}$

c.  $\frac{1/3}{6} = \frac{x}{12}$

d.  $\frac{1.5}{1/3} = \frac{t}{6}$

e.  $\frac{2.4}{x} = 5$

7. Solve the following problems using the 5-step problem solving process. Include the categories: Given, Goal, Math work, Check and Final result as a complete sentence.

a. If the scale on a map is 1 inch to 20 miles, what is the actual distance between two towns that are 3 inches apart on the map?

b. In November 2012 President Obama visited Phnom Penh, Cambodia as part of a summit of Asian leaders. Traffic in the city came to almost a complete standstill with cars moving at a rate of 2 miles in 4 hours. At this rate, how long would it take to travel a distance of 3.5 miles?

c. Ryan works a part-time job mowing lawns and can easily mow 3 lawns in 5 hours. If he got very busy one day and mowed 7 lawns, how long did it take him?

d. The director of a day care center can feed 7 children lunch for a week with 4 pounds of macaroni and cheese. If she has 16 pounds of macaroni and cheese, how many children can she feed lunch for a week?

e. On Thanksgiving Day, 2012, the New England Patriots scored 35 points in the second quarter to aid in their eventual 49 - 19 victory over the New York Jets. What was their unit rate of scoring per minute during that quarter (15 minutes)? If they had continued the second half (two more quarters) at that rate, what would the final score have been (New England scored 0 points in the first quarter).