Name: _____   Date: _____

Practice – Ratios/Rates/Proportions
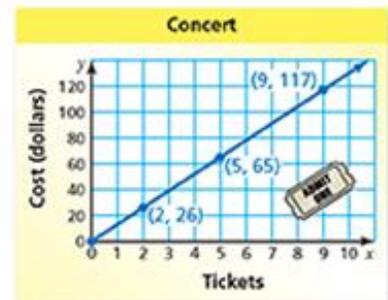
1.   Calculate the unit rate or constant of proportionality in each example.
                a.) $36 for 20 ounces of candy.   b.) y = 10x

                c.) (5, 25)   d.) 5 hours to go 20 miles

2.   If three pounds of apples cost $4.50, how much does 16 pounds of apples cost?

3.   a.) What is the ticket cost in dollars per ticket?

        b.) Write an equation for the graph.

        c.) Using the equation for the graph, find out how
        much 25 tickets will cost.

4.   Determine the better buy: 64 ounces of peanut butter for $9.60 or 16 ounces of peanut butter for $3.20.

5.   Write each ratio as a single fraction in simplest form.
            a.   18 red buttons : 12 blue buttons   b.) 5/4 inches to 2/3 inch

6.   Tell whether the two rates form a proportion:
     a.) 75mi in 3h; 140mi in 4h   b.) 12 gallons in 4 min; 21 gallons in 7 min

     c.) 150 steps in 50 ft; 72 steps in 24 ft   d.) 3 rotations in 675 days; 2 rotations in 730 days

7.   You spend 150 minutes in 3 classes. Write and solve a proportion to find out how many minutes you spend in 5 classes.

8. You can buy 3 Tshirts for $24. Write and solve a proportion that gives you the cost of buying 7 T-shirts.

9. The school team has 80 swimmers. The ratio of seventh-grade swimmers to all swimmers is 5:16. Write and solve a proportion that finds the number of seventh grade swimmers.

10. Describe and correct the error in solving the proportion.

$$\frac{m}{8} = \frac{15}{24}$$
$$8 \cdot m = 24 \cdot 15$$
$$m = 45$$

11.) Which car's has a travelling speed that is proportional.

hours	Car 1 (miles)	Car 2 (miles)	Car 3 (miles)
1	20	30	40
3	40	80	120
4	60	115	160
7	80	200	280
8	100	225	320

12.) The table shows the prices of three boxes of cereal. Which cereal has the **highest** unit price.

| Cereal Box size (ounces)	Price($)
48	5.45
32	3.95
20	3.10

A. the 20-ounce box   B. the 32-ounce box
C. the 48-ounce box   D. All three boxes have the same unit price.

13.) The speed limit on a highway is 70 miles per hour. About how fast is this in miles per **minute?**
     A. 4200 mi/min   B. 11.7 mi/min
     C. 1.17 mi/min   D. 0.117 mi/min

14.) The height of the water in a bathtub is shown in the graph.
     Part A: Find the rate of change in inches per minute.
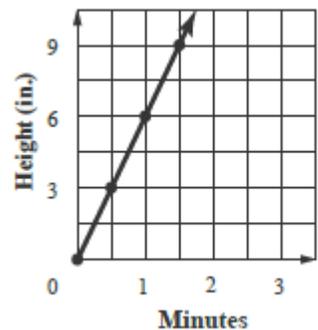
     Part B: Explain what the points (0,0) and (1,6) represent.