Math 7 Practice for Quiz   Name_____

Sections 1.4-1.6 Proportional Relationships   Date_____ Block _____

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1) Choose a proportion to solve using each of these methods:

$$\frac{7}{10} = \frac{35}{n} \qquad \frac{25}{30} = \frac{n}{18} \qquad \frac{8}{17} = \frac{n}{28} \qquad \frac{4.5}{5} = \frac{n}{15} \qquad \frac{1.8}{n} = \frac{4.5}{8}$$

A)There is one proportion that has a ratio that can be simplified. <u>Solve by simplifying that ratio first. Then use equivalent ratios</u>.

C) Choose 1 proportion to solve using algebraic steps.

B) <u>Choose 1 to solve by using equivalent ratios</u>.

Identify if each relationship is proportional OR non proportional. Then explain your reasoning.

2) Is the cost for the socks proportional to the number of pairs of socks?

| Cost for Socks	$2	$4	$6	$8
# of Pairs of Socks	1	2	3	4

3) Is the distance Mr. Easton drives proportional to the number of hours he rides? Explain your reasoning.

Mr. Easton's Car Ride
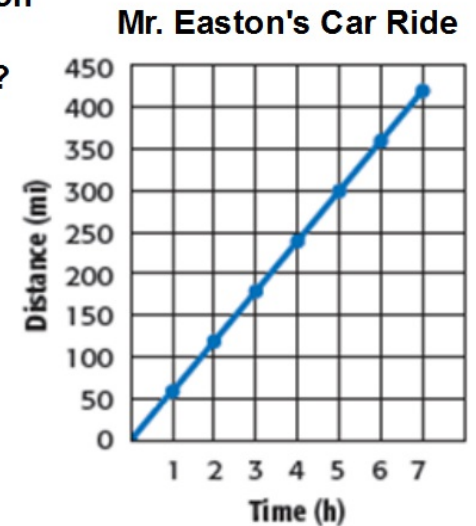
4) Antionio's Pizzeria charges $10 for a large pizza and $1.50 each topping. Is the cost of the pizza proportional to the number of toppings?

Cost					
# of Toppings	0	1	2	3	4

5) A taxi charges an initial cost of $2 and then a dollar for each mile. Is the cost of the taxi ride proportional to the number of miles?

Taxi Ride
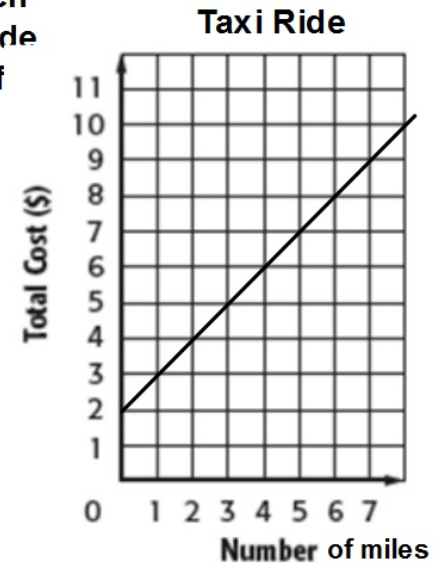
6) A cheerleading squad does 2 cheers every 5 minutes of the game. If the game is 50 minutes long, how many cheers will they do? Write a word rate, a proportion, and solve your proportion.

7) Studies have shown that approximately one out of five people are left-handed.
In a school with 350 students, predict how many left-handed students there will be. Write a word rate, a proportion, and solve your proportion.

8) Sara drove 170 miles in 3 hours. At this same rate, how far will she drive in 15 hours? Write word rate, proportion and solve your proportion.

9) Ashley is planning breakfast for a family event. Set up the word ratio and proportion that can be used to solve these problems. You do not need to solve the problems.

Deltan Waffles (serves 5)

$1\frac{3}{4}$ cups flour

$\frac{1}{2}$ teaspoon salt

1 tablespoon baking powder

$1\frac{1}{4}$ cups milk

$\frac{1}{2}$ cup shortening, melted

2 eggs

A) How much salt does she need if she is making the waffles for 15 people?

B) If she uses 16 eggs, how many people would the recipe serve?

C) How much flour will she need if she makes the recipe for 20 people?

10) * (Challenge) Stan is painting a windowless wall that is 14 ft by 20 ft and 3 of the same size walls but each of the three walls have two windows, each 2 ft by 3 ft. If it takes 1 gallon of paint to cover 350 square feet, find the number of gallons of paint that will be needed. Round to the nearest tenth of a gallon.

11) *(Challenge) Find the value of x that makes this equation true.

$$\frac{4.5}{17-x} = \frac{5}{8}$$

12) * (Challenge)
A) How many proportions can you make using the numbers 1, 3, 4, and 12 ? Show them.

B) At a basketball game the PTC sold 5 times as many drinks as candy bars. Altogether, they sold 240 drinks and candy bars. How many of each item were sold?

C) A square has a side length of 10 cm. Find the ratio of its perimeter to its area in simplest form.