

Name: _____

Class: _____

Math 8 – U2: Homework #1 – Ratios & Proportions

Date: _____

A) Write a ratio for each

There are 4 red, 2 green, 6 blue, and 3 yellow marbles in a bag.

1. red to blue

2. yellow: all

B) Write a ratio for each:

1. 2 ounces to 4 cups

2. 3 hours 15 minutes: 45 minutes

C) Write a unit rate for each:

1. \$25.29 for 9 gallons of gas

2. \$57 for 6 hours

D) Solve the following proportions.

1. $\frac{3}{4} = \frac{x}{10}$

2. $\frac{12}{t} = \frac{8}{6}$

3. $\frac{18}{16} = \frac{27}{y}$

4. $\frac{b}{20} = \frac{9}{15}$

E) Solve the following word problems. (Show all work!)

- 1.** Two students are preparing for a marathon. Hector ran 8 miles in 48 minutes; Mario ran 10 miles in 62 minutes. Who has the faster average speed?

- 2.** A canary's heart beats 200 times in 12 seconds. Using a proportion, how many times will it beat in 42 seconds?

- 3.** On level ground, a person 6 feet tall casts a shadow of 8 feet. At the same time, a nearby tree casts a shadow of 20 feet. Find the number of feet in the height of the tree.

- 4.** Imani gives vitamins to her dog. The recommended dosage is 2 teaspoons per day for adult dogs weighing 20 pounds. She needs to give vitamins to Bruiser, who weighs 75 pounds. What is the correct dosage she should give him?