

Math Whiz Unit 2 Mastery

Ratios and Proportional Reasoning

Name: _____

Class Period: 1 2 3 4

Date: _____

Ratios, Rates, & Unit Rates

- 1) A youth ice hockey game has three 20-minute periods. Colin plays 12 minutes each period. Which ratio represents **Colin's playing time compared to the total number of minutes of playing time possible**?
- A) 1 to 4 B) 3 to 20 C) 1 to 5 D) 3 to 5
- 2) The local grocery store is having a sale on watermelons. Mr. Jackson purchases 10 watermelons for a school picnic. He pays \$39.90 for the watermelons. What is the **price of each** watermelon?
- A) \$0.39 B) \$3.90 C) \$3.99 D) \$4.50
- 3) In science class, students are learning about organic compounds. An acetic acid molecule is made of 2 carbon atoms, 2 oxygen atoms, and 4 hydrogen atoms. What is the ratio of carbon atoms to oxygen and hydrogen atoms?
- A) 1:3 B) 1:4 C) 2:3 D) 1:2
- 4) Hannah found that an antivirus program on her personal computer scans 182 megabytes of data in 7 seconds. At what rate does her antivirus program scan the data?
- A) 25 megabytes per sec B) 26 megabytes per sec
C) 28 megabytes per sec D) 30 megabytes per sec
- 5) A train travels 210 miles in 3 hours, moving at a constant speed. At this rate, how long will it take for the train to travel 350 miles?
- A) 5 hours B) 7 hours C) 8 ½ hours D) 70 hours
- 6) Mrs. Silva orders 5 pizzas for every 20 students working on the campus clean-up. How many pizzas should she order if 36 students participate?
- A) 8 B) 9 C) 10 D) 12

Measurement

- 7) The male elephant at the city zoo weighs 8,000 pounds, which is the same as 4 tons. The female elephant weighs 7,000 pounds. How many tons does she weigh?
- A) 3 ¼ B) 3 ½ C) 3 ¾ D) 3 $\frac{7}{10}$
- 8) Victor needs 30 feet of rope. The rope he wants to buy is sold by the yard. If there are 3 feet in 1 yard, how many yards should he buy?
- A) 10 B) 13 C) 33 D) 90
- 9) An architect builds a model of a building in the shape of a rectangular prism. The model is 50.8 centimeters long. What is the length of the model in inches (2.54 cm = 1 in.)?
- A) 10 inches B) 15 inches C) 20 inches D) 25 inches
- 10) Convert:
- 16 g = ____ kg 3.5 m = ____ cm 6mL = ____ L

Percents

- 11) At Madison middle school, 60% of the 800 students participate in music. How many students participate in music?
- A) 133 B) 400 C) 480 D) 720
- 12) At Sydney's school, 85% of the girls attend the Spring Carnival. If 170 girls attend the carnival, how many girls are there in all?
- A) 144 B) 145 C) 200 D) 370

Unit 2 Mastery Score:

_____ / 12