# Math Whiz Unit 2 Mastery

Ratios and Proportional Reasoning

#### Ratios, Rates, & Unit Rates

 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 DD 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

### <u>Measurement</u>

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)  $3\frac{1}{4}$  B)  $3\frac{1}{2}$  C)  $3\frac{3}{4}$  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:

 $16 \text{ g} = \__k\text{g}$   $3.5 \text{ m} = \__c\text{m}$   $6\text{mL} = \__L$ 

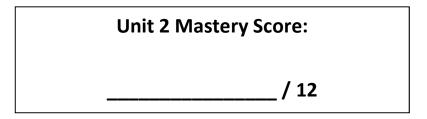
#### <u>Percents</u>

**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



## Class Period: 1 2 3 4 Date: \_\_\_\_\_

Name: \_\_\_\_\_