

Math 6 - Unit 2: Ratios, Rates, Proportions

End of Unit Test - STUDY GUIDE

Name: KEY

Class Period: 1 2 3 4 Date: _____

Vocabulary

Define the following terms:

- 1) customary system The primary system used in the US, which uses a variety of conversions.
- 2) metric system The system of measurement that uses a base 10 model used by most countries.
- 3) percent Number out of 100
- 4) proportion An equation of equivalent ratios.

Problem Solving. Show your work!

5) The ratio of whale sharks to dolphins at the Georgia Aquarium is 1 to 2. Based on that information, what is the missing value in the table?

Whale Sharks	1	6	5	10
Dolphins	2	12	10	20

6) 14 is 20% of what number?

$\frac{14}{x} = \frac{20}{100} = \frac{1}{5} \Rightarrow$ Rewrite $\frac{14}{x} = \frac{1}{5}$ x = 70

7) What is 60% of 400?

$x = \frac{4 \times 60}{100} = 240$ x = 240

8) Which value of x will make these ratios equivalent? $\frac{12}{6} = \frac{x}{7}$

$6x = 7(12)$
 $6x = 84$
 $\frac{6x}{6} = \frac{84}{6}$
x = 14

9) Alyssa pays \$48 for 8 tickets to the new Avengers movie. Write the ratio as a unit rate.

$\frac{\$48}{8 \text{ tickets}} \div 8 = \6 per 1 ticket

10) Jessica drove 288 miles in 4 hours. Oscar drove 189 miles in 3 hours. Who drove at the faster rate of speed?

Jessica $4 \overline{)288} = 72 \text{ mph}$ Oscar $3 \overline{)189} = 63 \text{ mph}$ Jessica drove faster.

11) Stacy the snake is 3 feet long. Owen the fish is 49 inches long. How much longer is Owen than Stacy? (1 foot = 12 inches)

$3 \text{ ft} = \frac{3 \times 12}{1} = 36 \text{ inches}$ Stacy is 36 in Owen is 13 in longer than Stacy.

12) The table below shows the number of tickets sold for each movie. What does the ratio 5:3 represent?

Item	Avengers	Thor	Captain America	Spider Man
Quantity Sold	12	15	30	10

Captain America : Avengers

13) The ratio of red to blue socks in a drawer is 8:12. If there are 80 socks in the drawer, how many are blue?

$$\frac{\text{Red}}{\text{Blue}} = \frac{8}{12}$$

$$\frac{12 \text{ blue}}{20 \text{ total}}$$

$$\frac{12}{20} = \frac{x}{80}$$

$$x = 48 \text{ blue socks}$$

14) The ratio of boys to girls in a class is 4:5. If there are 36 total kids in the class, how many boys are in the class?

$$\frac{B}{G} = \frac{4}{5}$$

$$\frac{B}{T} = \frac{4}{9}$$

$$\frac{4 \times 9}{9 \times 4} = \frac{x}{36}$$

$$x = 16 \text{ boys}$$

15) There are 80 people eating in a Chinese restaurant. If 25% of these people did **NOT** order an eggroll, how many people did order an eggroll?

16) Janiah went out to dinner with her friends and had great service. She wanted to leave a 20% tip on her \$39 bill. How much money will he leave as a tip?

17) The prices of 3 different bottles of shampoo are given in the table. Which size bottle is the **cheapest**, according to the price per ounce?

Size	Price	Price per 1 ounce
25 ounces	\$5.25	
15 ounces	\$2.40	
5 ounces	\$1.00	

18) The weight of an elephant is 13 kg. How many grams does the elephant weigh? (1 kg = 1000 g)

19) Seventy liters of soda were served at a party. How many kiloliters were served? (1000 L = 1 kL)

20) If 1 Ton is equal to 2,000 pounds, how many Tons are equal to 17,000 pounds?

21) The table shows survey results of the favorite desserts of 6th graders. What is the simplified ratio of those who selected ice cream **and** cake to total?

Dessert	Ice Cream	Cookies	Cake	Pie	Brownies	Other
# Votes	15	13	5	2	8	7