

Unit 2: Ratios, Rates, and Percentages

ADVANCED • SET 2

Name: _____ Date: _____

Show your work and give each answer as an exact number, fraction, or ratio in simplest form.

1. The ratio 14:21 in simplest form is equivalent to the ratio $n:96$. Find n .

Answer: _____

2. A hummingbird's heart beats 288 times in 3.2 minutes at a constant rate. What is its heart rate in beats per minute?

Answer: _____

3. A store sold 240 phone cases last month. If 35% of them were blue, how many blue cases were sold?

Answer: _____

4. A plant grew from 80 cm to 92 cm in one month. What was the percent increase in its height?

Answer: _____

5. A 2.5-liter bottle of juice costs \$4.20. What is the unit price in dollars per liter?

Answer: _____

6. A train travels at a constant speed and covers 340 km in 4 hours. At the same speed, how many kilometers does it travel in 6.5 hours?

Answer: _____

7. A recipe uses $\frac{3}{4}$ cup of sugar for 2 batches of cookies. At the same rate, how many cups of sugar are needed for 5 batches? Give your answer as a fraction in simplest form.

Answer: _____

8. In a class, 18 students play a sport. If this is 24% of the whole class, how many students are in the class?

Answer: _____

9. Red and blue marbles are in the ratio 5:3. If there are 128 marbles in total, how many are red?

Answer: _____

10. At a constant rate, 7 kg of apples cost \$10.50. How much do 12 kg of apples cost, in dollars?

Answer: _____

11. A jacket is priced at \$85. A 20% discount is applied, and then 8% sales tax is added to the discounted price. What is the final price in dollars?

Answer: _____

12. A person types at a constant rate of 150 words every 2.5 minutes. How many words do they type in 9 minutes?

Answer: _____