

Name: _____

Date: _____

Ratios and Proportions

Multiple Choice

Read each problem carefully and select the best answer.

1. A grocery store sells 4 apples for \$2.40. What is the unit price per apple?

- A) \$0.40 B) \$0.60 C) \$0.80 D) \$1.20

2. A recipe calls for 2 cups of sugar for every 5 cups of flour. If you use 10 cups of flour, how much sugar is needed?

- A) 2 cups B) 4 cups C) 5 cups D) 25 cups

3. Which of the following ratios is equivalent to 3:4?

- A) 6:9 B) 9:16 C) 15:20 D) 12:15

4. A map has a scale of 1 inch = 15 miles. If two cities are 3 inches apart on the map, how far apart are they in the real world?

- A) 5 miles B) 15 miles C) 30 miles D) 45 miles

5. In a class of 28 students, the ratio of boys to girls is 3:4. How many boys are in the class?

- A) 3 B) 12 C) 16 D) 21

Short Answer Problems

Show your work or explain your reasoning for each question.

6. Store A sells a 12-ounce box of cereal for \$3.60. Store B sells a 16-ounce box of the same cereal for \$4.48. Which store has the better price per ounce? Show the unit rate for both stores to prove your answer.

7. To make purple paint, Sarah mixes 3 parts red paint with 4 parts blue paint. If she uses 12 pints of blue paint, how many pints of red paint does she need?



8. A high-speed train travels 240 miles in 3 hours. At this constant speed, how long will it take the train to travel 400 miles?

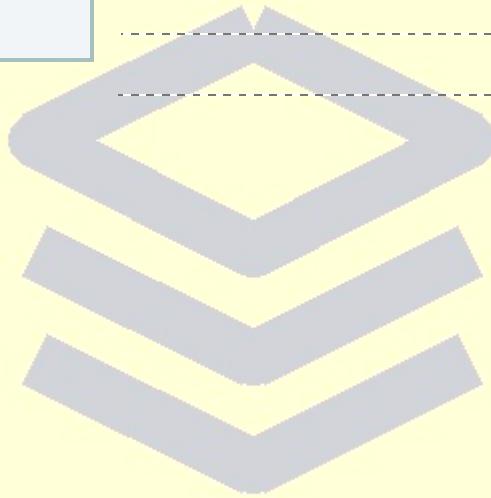
Real-World Applications

Pancake Recipe

Makes 10 pancakes

- 2 cups flour
- 1 cup milk
- 2 eggs

9. You want to make 25 pancakes for a large family breakfast. Calculate the amount of each ingredient you will need.



Answers

1. B) \$0.60 ($\$2.40 \div 4 = \0.60)
2. B) 4 cups (The flour doubled from 5 to 10, so the sugar doubles from 2 to 4)
3. C) 15:20 (Multiply both sides by 5: $3 \times 5 = 15$ and $4 \times 5 = 20$)
4. D) 45 miles ($3 \text{ inches} \times 15 \text{ miles/inch} = 45$)
5. B) 12 (Total parts = $3 + 4 = 7$. $28 \div 7 = 4$ students per part. $3 \text{ parts boys} \times 4 = 12 \text{ boys}$)
6. 300 miles. $180 \div 6 = 30$ miles per gallon. $30 \times 10 = 300$ miles.
7. 9 pints. $12 \div 4 = 3$, so the scale factor is 3. $3 \text{ parts red} \times 3 = 9 \text{ pints}$.
8. 5 hours. $240 \div 3 = 80$ miles per hour. $400 \div 80 = 5$ hours.
9. The scale factor is 2.5 ($25 \div 10 = 2.5$).

