

Grade 6

Topic: Ratios and Rates

Instructions

Read each question carefully and solve using your understanding of ratios and rates. Simplify ratios where needed, find equivalent ratios, and calculate unit rates using division. Show your working clearly and write your final answers in the spaces provided.

Part A: Understanding Ratios

- 1. Write the ratio of 4 apples to 6 oranges in simplest form.
- 2. A recipe uses 2 cups of sugar for every 5 cups of flour. What is the ratio of sugar to flour?
- 3. There are 12 boys and 16 girls in a class. What is the ratio of boys to total students?
- 4. Express the ratio 18:12 in simplest form.

5. A bag contains 3 red, 5 blue, and 2 green marbles. What is the ratio of blue to total marbles?

Part B: Equivalent Ratios

- 1. Fill in the blank to make equivalent ratios: 3:5 = -:10
- 2. Which of the following ratios is equivalent to 4:6?a) 2:3 b) 6:9 c) 8:12 d) All of the above
- 3. Are the ratios 5:10 and 3:6 equivalent? Show your working.
- 4. Write two ratios equivalent to 7:9.

Part C: Working with Rates

- 1. A car travels 180 km in 3 hours. What is its rate in km per hour?
- 2. A factory produces 400 toys in 8 hours. What is the rate of production per hour?
- 3. You read 60 pages in 2 hours. What is your reading rate in pages per hour?
- 4. A train moves at a rate of 90 km/h. How far will it travel in 4 hours?
- 5. A tap fills 15 liters of water in 5 minutes. What is the rate of flow per minute?

Part D: Word Problems

- 1. A school has 150 students and 10 teachers. What is the student-to-teacher ratio?
- 2. Jenny can run 6 km in 30 minutes. What is her speed in km/h?
- 3. A grocery store sells 3 kg of rice for \$9. What is the unit rate (price per kg)?

- 4. There are 25 girls and 35 boys in a camp. What is the ratio of girls to boys in simplest form?
- 5. A machine makes 120 parts in 4 hours. At this rate, how many parts can it make in 10 hours?
- 6. If a 2-liter bottle costs \$3, what is the cost per liter?

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