WORKSHEET

Rates and Proportional Relationships

Unsolved with Answer key

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Rates and Proportional Relationships

Part 1: Problems on Rates

Q1: A runner covers 15 kilometers in 2 hours. What is the speed in kilometers per hour?

Q2: A machine produces 240 units in 8 hours. What is the production rate in units per hour?

Q3: A car travels 480 miles on 16 gallons of gas. What is the car's fuel efficiency in miles per gallon?

Q4: A worker earns $90 for 6 hours of work. What is the hourly wage?

Q5: A water pump moves 180 gallons in 6 minutes. What is the flow rate in gallons per minute?

Q6: A cyclist covers 45 miles in 3 hours. What is the cyclist's speed in miles per hour?

Q7: A baker uses 20 pounds of flour to make 400 cookies. What is the rate of flour use per cookie?

Q8: A person drives 150 miles in 3.5 hours. What is the average speed in miles per hour?

Q9: A ship travels 600 miles in 30 hours. What is the speed of the ship in miles per hour?

Q10: A machine fills 300 bottles in 5 hours. What is the rate of bottle-filling per hour?

Part 2: Problems on Proportional Relationships

Q1: A recipe uses 3 cups of sugar to make 12 cupcakes. How many cups of sugar are needed to make 36 cupcakes?

Q2: A blueprint uses a scale of 1 inch to 20 feet. If two buildings are 7 inches apart on the blueprint, how far apart are they in real life?

Q3: 8 gallons of paint are used to cover 200 square meters. How many gallons are needed to cover 500 square meters?

Q4: A 10-foot ladder casts a 15-foot shadow. At the same time, a flagpole casts a 30-foot shadow. How tall is the flagpole?

Q5: The exchange rate is $1 = 0.90 euros. How many euros will you get for $350?

Q6: A car drives 200 miles in 4 hours. How far will it travel in 7 hours at the same speed?

Q7: A map has a scale of 1 inch = 100 miles. If two cities are 5 inches apart on the map, how far apart are they in miles?

Q8: A plant grows 4 inches in 2 weeks. How much will it grow in 6 weeks?

Q9: A recipe calls for 2 cups of milk to make 6 pancakes. How much milk is needed to make 18 pancakes?

Q10: The exchange rate is $1 = 0.75 British pounds. How many pounds will you get for $500?

<u>Answer Key</u>

Rates and Proportional Relationships

Part 1

1: Speed: 7.5 km/h

2: Production rate: 30 units per hour

3: Fuel efficiency: 30 miles per gallon

4: Hourly wage: $15 per hour

5: Flow rate: 30 gallons per minute

6: Speed: 15 miles per hour

7: Flour per cookie: 0.05 pounds per cookie

8: Average speed: 42.86 miles per hour

9: Speed of ship: 20 miles per hour

10: Bottle-filling rate: 60 bottles per hour

Part 2

1: Sugar needed: 9 cups

2: Real-life distance: 140 feet

3: Gallons needed: 20 gallons

4: Height of flagpole: 20 feet

5: Euros for $350: 315 euros

6: Distance in 7 hours: 350 miles

7: Real-life distance: 500 miles

8: Growth in 6 weeks: 12 inches

9: Milk needed: 6 cups

10: Pounds for $500: 375 pounds