Proportions Worksheet Answer Key PDF

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Part 1: Building a Foundation

What is a proportion?

undefined. A) A comparison of two numbers by addition

undefined. B) An equation stating two ratios are equivalent ✓

undefined. C) A comparison of two numbers by subtraction

undefined. D) An equation stating two numbers are equal

A proportion is an equation stating that two ratios are equivalent.

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A proportion is an equation stating that two ratios are equivalent.

Which of the following are examples of ratios?

undefined. A) 3:4 ✓

undefined. B) 5/6 ✓

undefined. C) 7+8

undefined. D) 9-2

Examples of ratios include 3:4 and 5/6.

Which of the following are examples of ratios?

undefined. A) 3:4 ✓
undefined. B) 5/6 ✓
undefined. C) 7+8
undefined. D) 9-2

3:4 and 5/6 are examples of ratios.

Explain how you can determine if two ratios form a proportion.

Two ratios form a proportion if their cross products are equal.

Explain how you can determine if two ratios form a proportion.

You can determine if two ratios form a proportion by cross-multiplying and checking if the products are equal.

List two real-life applications of proportions.

1. Application 1
Cooking recipes

2. Application 2
Map scaling

Proportions are used in cooking and in map reading.

What method is commonly used to solve proportions?

undefined. A) Addition
undefined. B) Subtraction
undefined. C) Cross-multiplication ✓
undefined. D) Division

Cross-multiplication is the common method used to solve proportions.

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Cross-multiplication is commonly used to solve proportions.

Part 2: Understanding and Interpretation

Which statements are true about proportions?

undefined. A) They can be used to scale recipes. ✓
undefined. B) They are only applicable in mathematics.
undefined. C) They help in creating maps. ✓
undefined. D) They are not useful in real life.

Proportions can be used to scale recipes and create maps.

Which statements are true about proportions?

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undefined. D) They are not useful in real life.

They can be used to scale recipes and help in creating maps.

Describe a scenario where you might use proportions to solve a problem.

Proportions can be used in cooking, budgeting, or scaling models.

Describe a scenario where you might use proportions to solve a problem.

Proportions can be used in scenarios like cooking or budgeting.

Part 3: Application and Analysis

If a map scale is 1 inch = 10 miles, how many miles does 5 inches represent?

undefined. A) 15 miles

undefined. B) 50 miles ✓

undefined. C) 5 miles

undefined. D) 100 miles

5 inches represents 50 miles.

If a map scale is 1 inch = 10 miles, how many miles does 5 inches represent?

undefined. A) 15 miles

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5 inches represents 50 miles.

You have a recipe that requires 2 cups of flour for 3 servings. How much flour is needed for 9 servings?

undefined. A) 4 cups

undefined. B) 6 cups ✓

undefined. C) 9 cups

undefined. D) 12 cups

You need 6 cups of flour for 9 servings.

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undefined. C) 9 cups

undefined. D) 12 cups

You need 6 cups of flour for 9 servings.

Solve the proportion: 4/x = 8/16. Show your work.

Cross-multiplying gives 4 * 16 = 8 * x, leading to x = 8.

Solve the proportion: 4/x = 8/16. Show your work.

Cross-multiplying gives x = 2.

Which graph correctly represents a proportional relationship?

undefined. A) A curved line
undefined. B) A straight line not passing through the origin
undefined. C) A straight line passing through the origin ✓
undefined. D) A horizontal line

A straight line passing through the origin represents a proportional relationship.

Which graph correctly represents a proportional relationship?

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undefined. C) A straight line passing through the origin ✓
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A straight line passing through the origin represents a proportional relationship.

In a directly proportional relationship, which of the following is true?

undefined. A) As one quantity increases, the other decreases.
undefined. B) The graph is a straight line through the origin. ✓
undefined. C) The ratio of the two quantities remains constant. ✓
undefined. D) The graph is a curve.

In a directly proportional relationship, the graph is a straight line through the origin.

In a directly proportional relationship, which of the following is true?

undefined. A) As one quantity increases, the other decreases.
undefined. B) The graph is a straight line through the origin. ✓
undefined. C) The ratio of the two quantities remains constant. ✓

undefined. D) The graph is a curve.

The graph is a straight line through the origin and the ratio remains constant.

Analyze the relationship between time and distance in a speed problem. How does proportion help in solving such problems?

Proportions help relate time, distance, and speed in solving problems.

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Proportions help relate time, distance, and speed in solving problems.

Part 4: Evaluation and Creation

Evaluate the following statements about proportions:

undefined. A) They are essential for creating accurate models. ✓
undefined. B) They are not useful in scientific experiments.
undefined. C) They can predict outcomes in financial planning. ✓
undefined. D) They are irrelevant in technology development.

Proportions are essential for creating accurate models and predicting outcomes.

Evaluate the following statements about proportions:

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Proportions are essential for creating accurate models and predicting outcomes.

Create a real-world problem that involves proportions and solve it. Explain your reasoning and solution process.

A real-world problem could involve scaling a recipe or budgeting.

Create a real-world problem that involves proportions and solve it. Explain your reasoning and solution process.

Creating a problem involves identifying a scenario where proportions are applicable.