

Equivalent Ratios Worksheet

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Part 1: Building a Foundation

What is a ratio?

Hint: Think about how two quantities can be compared.

- A) A comparison of two quantities
- B) A type of fraction
- C) A multiplication of two numbers
- D) A division of one number by another

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Which of the following can be used to find equivalent ratios? (Select all that apply)

Hint: Consider operations that maintain the relationship between the two quantities.

- A) Adding the same number to both terms
- B) Multiplying both terms by the same number
- C) Dividing both terms by the same number
- D) Subtractin the same number from both terms

Which of the following can be used to find equivalent ratios? (Select all that apply)

Hint: Consider operations that maintain the ratio.

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- B) Multiplying both terms by the same number
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Explain what it means for two ratios to be equivalent. Provide an example.

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List two methods to verify if two ratios are equivalent.

Hint: Consider mathematical operations that can be applied to both ratios.

1. Method 1

2. Method 2

Part 2: comprehension and Application

Which statements are true about simplifying ratios? (Select all that apply)

Hint: Consider the process of reducing ratios to their simplest form.

- A) Simplifying a ratio changes its value.
- B) Simplifying a ratio involves dividing both terms by their greatest common divisor.
- C) Simplifying a ratio makes it easier to compare with other ratios.
- D) Simplifying a ratio is the same as finding an equivalent ratio.

Which statements are true about simplifying ratios? (Select all that apply)

Hint: Consider the effects of simplifying on the value of the ratio.

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A map uses a scale of 1:100,000. If the distance between two cities on the map is 3 cm, what is the actual distance between the cities in kilometers?

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You have a recipe that calls for a ratio of 2 cups of flour to 3 cups of sugar. If you want to make a half batch, what is the equivalent ratio of flour to sugar?

Hint: Think about how to halve both parts of the ratio.

1. Flour

2. Sugar

Part 3: Analysis, Evaluation, and Creation

Analyze the following scenarios and identify which ones demonstrate equivalent ratios. (Select all that apply)

Hint: Look for relationships that maintain the same ratio.

- A) A car travels 60 miles in 1 hour and 120 miles in 2 hours.
- B) A recipe uses 2 eggs for every 3 cups of flour and 4 eggs for every 6 cups of flour.
- C) A painting is 4 feet wide and 6 feet tall, and another painting is 8 feet wide and 12 feet tall.
- D) A school has 30 teachers and 300 students, and another school has 20 teachers and 200 students.

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Evaluate the following statement: "If two ratios are equivalent, then they must have the same terms." Is this statement true or false? Explain your reasoning.

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