

Simplifying Fractions Worksheet

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Part 1: Building a Foundation

What is the first step in simplifying a fraction?

Hint: Think about the process of finding common factors.

- Multiply the numerator and denominator
- Add the numerator and denominator
- Find the greatest common divisor (GCD)
- Subtract the numerator from the denominator

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Which of the following are methods to find the GCD of two numbers? (Select all that apply)

Hint: Consider different mathematical techniques.

- Listing factors
- Using the Euclidean algorithm
- Dividing by the smallest number
- Multiplying the numbers

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Hint: Consider different strategies for finding common factors.

- Listing factors

- Using the Euclidean algorithm
- Dividing by the smallest number
- Multiplying the numbers

Explain why simplifying a fraction does not change its value.

Hint: Consider the relationship between the numerator and denominator.

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List the steps to simplify the fraction 12/16.

Hint: Think about finding the GCD and dividing both parts.

1. Step 1

2. Step 2

3. Step 3

4. Final Result

Which of the following fractions is already in its simplest form?

Hint: Look for fractions that cannot be reduced further.

- 4/8
- 5/10
- 7/9
- 6/12

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Part 2: Application and Analysis

Simplify the fraction 24/36. What is the result?

Hint: Find the GCD and divide both parts.

- 2/3
- 3/4
- 4/6
- 6/9

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- 3/4
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Which of the following fractions can be simplified to 3/5? (Select all that apply)

Hint: Look for fractions that share the same simplest form.

- 6/10
- 9/15
- 12/20
- 15/25

Which of the following fractions can be simplified to $\frac{3}{5}$? (Select all that apply)

Hint: Look for fractions that share the same simplest form.

- 6/10
- 9/15
- 12/20
- 15/25

Given the fraction $\frac{50}{100}$, apply the steps to simplify it and explain your reasoning.

Hint: Consider the GCD and how you would divide both parts.

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Which of the following statements is true about the relationship between a fraction and its simplest form?

Hint: Think about the characteristics of simplest forms.

- The simplest form has a larger numerator and denominator.
- The simplest form has a smaller numerator and denominator.
- The simplest form is always a whole number.
- The simplest form is always an improper fraction.

Analyze the fractions below and determine which ones can be simplified to the same simplest form. (Select all that apply)

Hint: Look for common factors in the fractions.

- 8/12
- 10/15
- 16/24
- 20/30

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- 10/15
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Analyze the fraction 45/60 and explain the process of simplifying it, including any patterns you notice.

Hint: Consider the GCD and how it applies to this fraction.

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Hint: Consider the GCD and how it relates to the numerator and denominator.

Part 3: Evaluation and Creation

Evaluate the following scenarios and determine which represent correctly simplified fractions. (Select all that apply)

Hint: Check each fraction to see if it can be simplified further.

- 14/28 simplified to 1/2
- 21/28 simplified to 3/4
- 30/50 simplified to 3/5
- 45/60 simplified to 3/4

Evaluate the following scenarios and determine which represent correctly simplified fractions. (Select all that apply)

Hint: Look for fractions that cannot be reduced further.

- 14/28 simplified to 1/2
- 21/28 simplified to 3/4
- 30/50 simplified to 3/5
- 45/60 simplified to 3/4

Create a real-world scenario where simplifying fractions would be necessary, and explain how you would apply the concept to solve the problem.

Hint: Think about situations involving measurements or ratios.

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