

Simplifying Fractions Worksheet Questions and Answers PDF

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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

■ The first step in simplifying a fraction is to find the greatest common divisor (GCD).

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■ The first step in simplifying a fraction is to find the greatest common divisor (GCD).

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

Methods to find the GCD include listing factors and using the Euclidean algorithm.

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

Hint: Consider different strategies for finding common factors.

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

Methods to find the GCD include listing factors and using the Euclidean algorithm.

Explain why simplifying a fraction does not change its value.

Hint: Consider the relationship between the numerator and denominator.

Simplifying a fraction does not change its value because you are dividing both the numerator and denominator by the same number.

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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

Find the GCD of 12 and 16, which is 4.

2. Step 2

Divide the numerator (12) by 4 to get 3.

3. Step 3

Divide the denominator (16) by 4 to get 4.

4. Final Result

The simplified fraction is 3/4.

To simplify 12/16, find the GCD (which is 4) and divide both the numerator and denominator by 4.

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

| The fraction $7/9$ is already in its simplest form.

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

Hint: Look for fractions that cannot be reduced further.

- $4/8$
- $5/10$
- $7/9$ ✓
- $6/12$

| The fraction $7/9$ is already in its simplest form.

Part 2: Application and Analysis

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

Hint: Find the GCD and divide both parts.

- $2/3$ ✓
- $3/4$
- $4/6$
- $6/9$

| The simplified result of $24/36$ is $2/3$.

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

Hint: Find the GCD and divide both parts.

- $2/3$ ✓
- $3/4$
- $4/6$
- $6/9$

| The simplified result of $24/36$ is $2/3$.

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

▮ Fractions that can be simplified to $\frac{3}{5}$ include $\frac{6}{10}$, $\frac{9}{15}$, and $\frac{12}{20}$.

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

▮ Fractions that can be simplified to $\frac{3}{5}$ include $\frac{6}{10}$, $\frac{9}{15}$, and $\frac{12}{20}$.

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.

▮ To simplify $\frac{50}{100}$, divide both by 50 to get $\frac{1}{2}$.

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.

To simplify $50/100$, find the GCD (which is 50) and divide both the numerator and denominator by 50.

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.

The simplest form of a fraction has a smaller numerator and denominator compared to the original 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.

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

Fractions $8/12$, $10/15$, $16/24$, and $20/30$ can all be simplified to the same simplest form.

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.

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

The fractions $8/12$, $10/15$, $16/24$, and $20/30$ can all be simplified to the same simplest form.

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.

To simplify $45/60$, divide both by 15 to get $3/4$.

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

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

To simplify $45/60$, find the GCD (which is 15) and divide both parts by 15.

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 $3/4$

Correctly simplified fractions include $14/28$ to $1/2$, $21/28$ to $3/4$, and $30/50$ to $3/5$.

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

■ The correctly simplified fractions are 14/28 to 1/2, 21/28 to 3/4, and 30/50 to 3/5.

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.

■ A real-world scenario could involve cooking measurements where fractions need to be simplified for proper ratios.

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.

■ A real-world scenario could involve cooking, where you need to adjust a recipe that uses fractions of ingredients.