

**Help Please!write Percents 1. 6 31/33
2. 1/8write As Decimal 1. 5 4/25 2.
3/8**

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Understanding how to convert mixed numbers and fractions into percents and decimals is essential for many areas of mathematics, finance, and everyday problem-solving. Whether you're working on homework, preparing for a test, or trying to understand real-world data, mastering these conversions can greatly improve your math skills. In this comprehensive guide, we will explore how to convert mixed numbers and fractions—specifically, $6 \frac{31}{33}$, $\frac{1}{8}$, $5 \frac{4}{25}$, and $\frac{3}{8}$ —into percents and decimals. We'll break down each step clearly, include helpful formulas, and provide practice tips to ensure you can confidently perform these conversions.

Converting Mixed Numbers and Fractions to Decimals and Percents

Before diving into specific examples, it's important to understand the basic concepts and formulas involved in these conversions.

Key Concepts

- **Mixed Numbers:** Numbers composed of a whole part and a fractional part (e.g., $6 \frac{31}{33}$).
- **Fractions:** Numbers expressed as a numerator over a denominator (e.g., $\frac{1}{8}$).
- **Decimals:** Numbers expressed with a decimal point (e.g., 0.5).
- **Percents:** Numbers expressed as a part of 100 (e.g., 50%).

Conversion Formulas

1. **Fraction to Decimal:** Divide numerator by denominator.
2. **Decimal to Percent:** Multiply decimal by 100.
3. **Fraction to Percent:** Convert to decimal first, then multiply by 100.
4. **Mixed Number to Decimal/Percent:** Convert the fractional part to decimal and add to the whole number before proceeding.

Converting the Given Numbers to Decimals and Percents

Let's examine each number, understand how to convert it into decimal and percent forms, and see detailed examples.

1. Converting $6 \frac{31}{33}$

This is a mixed number consisting of a whole number (6) and a fraction ($\frac{31}{33}$).

Step 1: Convert the fractional part to a decimal

- Divide numerator by denominator: $31 \div 33$
- $31 \div 33 \approx 0.939393\dots$

Step 2: Combine with the whole number

- Add the decimal to the whole number: $6 + 0.939393\dots \approx 6.939393\dots$

Step 3: Convert to percent

- Multiply decimal by 100: $6.939393\dots \times 100 \approx 693.94\%$

Summary for $6 \frac{31}{33}$

- **Decimal form:** approximately 6.9394
- **Percent form:** approximately 693.94%

2. Converting $\frac{1}{8}$

This is a simple fraction.

Step 1: Convert to decimal

- Divide numerator by denominator: $1 \div 8 = 0.125$

Step 2: Convert to percent

- Multiply decimal by 100: $0.125 \times 100 = 12.5\%$

Summary for 1/8

- **Decimal form:** 0.125
- **Percent form:** 12.5%

Converting the Second Set of Numbers: 1. 5 4/25 and 2. 3/8

Now, let's analyze the remaining numbers, which include mixed numbers and fractions requiring conversion.

3. Converting 5 4/25

This is a mixed number with a whole part (5) and a fractional part (4/25).

Step 1: Convert fractional part to decimal

- Divide numerator by denominator: $4 \div 25 = 0.16$

Step 2: Combine with the whole number

- Add decimal to whole number: $5 + 0.16 = 5.16$

Step 3: Convert to percent

- Multiply decimal by 100: $5.16 \times 100 = 516\%$

Summary for 5 4/25

- **Decimal form:** 5.16
- **Percent form:** 516%

4. Converting 3/8

This is a simple fraction.

Step 1: Convert to decimal

- Divide numerator by denominator: $3 \div 8 = 0.375$

Step 2: Convert to percent

- Multiply decimal by 100: $0.375 \times 100 = 37.5\%$

Summary for 3/8

- **Decimal form:** 0.375
- **Percent form:** 37.5%

Practical Applications of These Conversions

Understanding how to convert fractions and mixed numbers into percents and decimals has numerous practical applications:

1. **Financial Calculations:** Calculating interest rates, discounts, and percentages in budgeting or shopping.
2. **Statistics and Data Analysis:** Interpreting data percentages and proportions.
3. **Cooking and Recipes:** Adjusting ingredient quantities expressed as fractions.
4. **Education and Testing:** Solving math problems that require conversions between forms.

Tips for Accurate Conversions

To ensure precision and efficiency when converting fractions and mixed numbers:

- Use a calculator for dividing fractions to avoid errors.
- Round decimals to a reasonable number of decimal places based on context.
- Double-check your calculations, especially when dealing with recurring decimals.
- Practice with different types of fractions to become more confident.

Practice Problems

Test your understanding with additional practice:

1. Convert $7 \frac{2}{5}$ into decimal and percent.
2. Express $\frac{4}{9}$ as a decimal and percentage.
3. Transform $3 \frac{1}{2}$ into decimal and percent.
4. Change $\frac{11}{16}$ into decimal and percent.

Summary

Converting mixed numbers and fractions into decimals and percents is a fundamental skill that enhances mathematical literacy and problem-solving capabilities. Remember to convert fractions to decimals by division, then multiply by 100 to find the percentage. For mixed numbers, convert the fractional part first, then add to the whole number before proceeding. With consistent practice, these conversions will become second nature, empowering you to interpret and manipulate numerical data confidently.

If you follow the steps outlined in this guide, you'll be well-equipped to handle any similar problems and apply these skills across various contexts with ease. Keep practicing, and don't hesitate to revisit these concepts whenever needed!

Frequently Asked Questions

How do I convert the mixed number $6 \frac{31}{33}$ to a percent?

First, convert $6 \frac{31}{33}$ to an improper fraction: $6 + \frac{31}{33} = \frac{(6 \cdot 33 + 31)}{33} = \frac{(198 + 31)}{33} = \frac{229}{33}$. Then, divide 229 by 33 to get the decimal: $229 \div 33 \approx 6.9394$. To convert to percent, multiply by 100: $6.9394 \times 100 \approx 693.94\%$. So, $6 \frac{31}{33}$ is approximately 693.94%.

What is $\frac{1}{8}$ written as a decimal?

1 divided by 8 equals 0.125. Therefore, $\frac{1}{8}$ as a decimal is 0.125.

How do I convert the mixed number $5 \frac{4}{25}$ to a decimal?

Convert $5 \frac{4}{25}$ to an improper fraction: $5 + \frac{4}{25} = \frac{(5 \cdot 25 + 4)}{25} = \frac{(125 + 4)}{25} = \frac{129}{25}$. Divide 129 by 25: $129 \div 25 = 5.16$. So, $5 \frac{4}{25}$ as a decimal is 5.16.

What is $\frac{3}{8}$ written as a decimal?

Divide 3 by 8: $3 \div 8 = 0.375$. Thus, $\frac{3}{8}$ as a decimal is 0.375.

How do I convert the mixed number $6 \frac{31}{33}$ to a percent step by step?

Convert to improper fraction: $\frac{229}{33}$. Divide: $229 \div 33 \approx 6.9394$. Multiply by 100 to get percent: $6.9394 \times 100 \approx 693.94\%$. Therefore, $6 \frac{31}{33} \approx 693.94\%$.

Is the decimal 0.125 equivalent to $\frac{1}{8}$?

Yes, 0.125 is equal to $\frac{1}{8}$ because dividing 1 by 8 gives 0.125.

Convert the mixed number $5 \frac{4}{25}$ into a decimal and then to a percentage.

First, convert to decimal: $5 \frac{4}{25} = \frac{129}{25} = 5.16$. Then, to get the percentage, multiply by 100: $5.16 \times 100 = 516\%$. So, $5 \frac{4}{25}$ is 516%.

What is the decimal equivalent of $\frac{3}{8}$, and how do I express it as a percentage?

$\frac{3}{8}$ as a decimal is 0.375. To express as a percentage, multiply by 100: $0.375 \times 100 = 37.5\%$. So, $\frac{3}{8}$ equals 0.375 or 37.5%.

Why is converting mixed numbers to decimals and percents useful?

Converting mixed numbers to decimals and percents helps in easier comparison,

calculations, and understanding of proportions in real-world contexts like discounts, measurements, and statistics.

Additional Resources

Help Please! Write Percents and Decimals - An In-Depth Guide for Learners and Educators

Understanding how to convert fractions into percents and decimals is a fundamental skill in mathematics that underpins many real-world applications, from financial literacy to science and engineering. Despite its importance, many students and educators encounter difficulties in mastering these conversions, often seeking clear, step-by-step guidance. This article offers a comprehensive analysis of the specific problems: converting the fractions $6\frac{31}{33}$ and $1\frac{1}{8}$ into percents, and converting $1.5\frac{4}{25}$ and $\frac{3}{8}$ into decimals. Through detailed explanations, illustrative examples, and educational insights, we aim to clarify these concepts and provide practical strategies for effective learning.

The Significance of Mastering Fraction-to-Percent and Fraction-to-Decimal Conversions

Converting fractions into percents and decimals is essential because:

- Real-world applications: Percentages are used in discounts, interest rates, statistics, and data interpretation.
- Enhanced mathematical literacy: Understanding these conversions fosters a deeper grasp of ratios, proportions, and proportional reasoning.
- Academic success: Many standardized tests and curricula emphasize these skills, making mastery crucial for academic achievement.

Despite their importance, learners often struggle with conversions due to misconceptions, procedural errors, or lack of conceptual understanding. Addressing these challenges requires a thorough exploration of the foundational principles and practical methods.

Deciphering the First Set: Converting Mixed Numbers and Fractions to Percents

1. Converting $6\frac{31}{33}$ to Percent

Step 1: Convert the mixed number to an improper fraction

- Mixed number: $6\frac{31}{33}$
- Convert to improper fraction:

$$\left(6 \frac{31}{33} = \frac{(6 \times 33) + 31}{33} = \frac{198 + 31}{33} = \frac{229}{33}\right)$$

Step 2: Convert the improper fraction to a decimal

- Divide numerator by denominator:

$$(229 \div 33 \approx 6.9394)$$

Step 3: Convert decimal to percent

- Multiply by 100:

$$(6.9394 \times 100 \approx 693.94\%)$$

Result: $6 \frac{31}{33} \approx 693.94\%$

Educational note: The large percentage indicates a value greater than 100%, which is common when converting improper fractions representing quantities exceeding one.

2. Converting $1/8$ to Percent

Step 1: Convert the fraction to decimal

- Divide numerator by denominator:

$$(1 \div 8 = 0.125)$$

Step 2: Convert decimal to percent

- Multiply by 100:

$$(0.125 \times 100 = 12.5\%)$$

Result: $1/8 = 12.5\%$

Deciphering the Second Set: Converting Mixed Numbers and Fractions to Decimals

1. Converting $1.5 \frac{4}{25}$ to Decimal

Step 1: Convert the mixed number to an improper fraction

- 1.5 is a decimal, but for clarity, convert to fraction:

$$1.5 = \left(\frac{3}{2} \right)$$

- Now, combine with $4/25$:

Since the mixed number is $1.5 \frac{4}{25}$, interpret as:

$$(1.5 + \frac{4}{25})$$

- Alternatively, convert 1.5 to fraction:

$$(\frac{3}{2})$$

- To add $(\frac{3}{2})$ and $(\frac{4}{25})$, find common denominator:

- Denominator of 2 and 25: 50

- Convert both fractions:

$$(\frac{3}{2} = \frac{75}{50})$$

$$(\frac{4}{25} = \frac{8}{50})$$

- Sum:

$$(\frac{75 + 8}{50} = \frac{83}{50})$$

Step 2: Convert to decimal

- Divide numerator by denominator:

$$(83 \div 50 = 1.66)$$

Result: $1.5 \frac{4}{25} \approx 1.66$

2. Converting $3/8$ to Decimal

Step 1: Divide numerator by denominator

$$(3 \div 8 = 0.375)$$

Result: $3/8 = 0.375$

Educational Strategies and Common Pitfalls

Strategies for Effective Conversion:

- Use of long division: For fractions with uncommon denominators, long division ensures accuracy.
- Simplify before converting: Reduce fractions to simplest form to facilitate easier calculations.
- Leverage decimal equivalents: Recognize common fractions (e.g., $1/2=0.5$, $1/4=0.25$) for quick conversions.
- Practice with mixed numbers: Break down mixed numbers into their fractional

and decimal parts separately.

Common Pitfalls:

- Misinterpreting mixed numbers: Confusing the decimal and fractional parts can lead to errors.
- Incorrect denominator handling: Failing to find the least common denominator when adding fractions.
- Rounding errors: Rounding prematurely can distort the final percentage or decimal.

Practical Applications and Real-World Relevance

Mastering these conversions enables learners to:

- Calculate discounts during shopping (e.g., 25% off)
- Interpret data and statistics in reports
- Understand interest rates and financial percentages
- Analyze proportions in scientific data

Moreover, being proficient in these skills improves overall numeracy and confidence in handling quantitative information.

Conclusion: Bridging the Gap Between Concept and Practice

The ability to convert fractions into percents and decimals is an essential mathematical skill that requires both conceptual understanding and procedural fluency. By systematically approaching the conversion process—whether transforming mixed numbers to decimal form or converting fractions to percentages—learners can develop accuracy and confidence.

The specific problems discussed— $6\frac{31}{33}$, $\frac{1}{8}$, $1.5\frac{4}{25}$, and $\frac{3}{8}$ —serve as representative examples illustrating key techniques. Understanding these conversions not only enhances mathematical literacy but also empowers individuals to engage meaningfully with everyday numerical data.

Educational institutions and instructors should emphasize visual aids, real-world contexts, and practice exercises to reinforce these skills. For learners, persistent practice and conceptual clarity are vital to overcoming common challenges and achieving mastery.

In essence, the journey from fractions to percents and decimals is a foundational step toward broader mathematical competence and everyday numeracy. Help is indeed available, and with the right tools and understanding, anyone can navigate these conversions with confidence.

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