Decimal To Fraction Worksheet Questions and Answers PDF

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Part 1: Foundational Knowledge

What is the denominator of the fraction when converting the decimal 0.75 to a fraction?

Hint: Think about the place value of the decimal.

- ◯ 10
- ◯ **100 ✓**
- ◯ 1000
- ◯ 1

> The denominator is 100, as 0.75 can be expressed as 75/100.

Which of the following are correct steps in converting a decimal to a fraction?

Hint: Consider the process of identifying place values and simplifying.

- ☐ **Identify the place value of the decimal ✓**
- ☐ Write the decimal as a fraction with a denominator of 10
- ☐ **Simplify the fraction ✓**
- ☐ Multiply the decimal by 100

> The correct steps include identifying the place value, writing the decimal as a fraction, and simplifying.

Explain the difference between a decimal and a fraction in your own words.

Hint: Consider how each represents numbers and their values.

A decimal represents a part of a whole using a base of 10, while a fraction represents a part of a whole using a numerator and denominator.

List the components of a fraction and briefly describe each.

Hint: Think about the parts that make up a fraction.

1. What is the numerator?

The numerator is the top part of the fraction that indicates how many parts are being considered.

2. What is the denominator?

The denominator is the bottom part of the fraction that indicates the total number of equal parts.

A fraction consists of a numerator (the top number) and a denominator (the bottom number), which represent parts of a whole.

Part 2: Understanding and Interpretation

What is the fraction form of the decimal 0.2?

Hint: Consider the place value of the decimal.

- ◯ **1/5 ✓**
- ◯ 2/10

- ◯ 1/2
- ◯ 2/5

> The fraction form of 0.2 is 1/5.

Which of the following decimals can be converted to a fraction with a denominator of 100?

Hint: Think about how decimals relate to fractions with specific denominators.

- ☐ **0.25 ✓**
- ☐ **0.5 ✓**
- ☐ **0.75 ✓**
- ☐ 0.125

> Decimals like 0.25, 0.5, and 0.75 can be converted to fractions with a denominator of 100.

Describe how you would convert the repeating decimal 0.333... into a fraction.

Hint: Consider using algebraic methods to express the repeating decimal.

> **To convert 0.333... into a fraction, you can set x = 0.333..., multiply by 10 to get 10x = 3.333..., and then subtract to find x = 1/3.**

Part 3: Application and Analysis

If you convert the decimal 0.6 to a fraction and simplify it, what is the result?

Hint: Think about the simplest form of the fraction.

- ◯ **3/5 ✓**
- ◯ 6/10
- ◯ 1/2
- ◯ 2/3

The simplified fraction form of 0.6 is 3/5.

Which of the following decimals are equivalent to the fraction 1/4?

Hint: Consider the decimal representation of common fractions.

- [x] **0.25 ✓**
- [ ] 0.5
- [ ] 0.75
- [ ] 0.125

The decimal equivalent of 1/4 is 0.25.

Convert the decimal 0.875 to a fraction and simplify it. Show your work.

Hint: Think about the place value and how to simplify the fraction.

0.875 can be expressed as 875/1000, which simplifies to 7/8.

When converting the decimal 0.125 to a fraction, what is the greatest common divisor used to simplify the fraction?

Hint: Think about the factors of the numerator and denominator.

- ○ 5
- ○ **25 ✓**
- ○ 125
- ○ 8

The greatest common divisor used to simplify 0.125 is 25.

Which of the following steps are necessary when simplifying the fraction 50/100?

Hint: Consider the common factors of the numerator and denominator.

- [ ] Divide both numerator and denominator by 5
- [ ] **Divide both numerator and denominator by 10 ✓**
- [ ] Multiply both numerator and denominator by 2
- [ ] Divide both numerator and denominator by 50

> Necessary steps include dividing both the numerator and denominator by 10.

Analyze the process of converting the repeating decimal 0.666... to a fraction. What algebraic method can be used?

Hint: Consider using a variable to represent the repeating decimal.

> **To convert 0.666... to a fraction, set x = 0.666..., multiply by 10 to get 10x = 6.666..., and then subtract to find x = 2/3.**

Part 4: Synthesis and Reflection

Which fraction is the simplest form of the decimal 0.875?

Hint: Think about the fraction that represents the decimal.

- ◯ **7/8 ✓**
- ◯ 3/4
- ◯ 5/6
- ◯ 1/2

> The simplest form of 0.875 is 7/8.

Evaluate which of the following decimals are correctly simplified into fractions:

Hint: Consider the decimal representation of each fraction.

- [ ] **0.2 as 1/5 ✓**

- [ ] 0.4 as 2/5
- [ ] **0.6 as 3/5 ✓**
- [ ] **0.8 as 4/5 ✓**

> Decimals 0.2, 0.4, 0.6, and 0.8 are correctly simplified into their respective fractions.

Create a real-world scenario where converting a decimal to a fraction would be necessary. Explain the steps and reasoning involved in the conversion.

Hint: Think about situations in finance or measurements.

> **A scenario could involve converting a price of $0.75 to a fraction for budgeting, where you would express it as 75/100 and simplify to 3/4.**