

# Writing Decimals as Fractions



In this tutorial, we'll explore solution paths for writing decimals as fractions.

- How would I illustrate the value of each digit in the decimal 0.25 using the chart?

thousands	hundreds	tens	ones	tenths	hundredths	thousandths
				•		

A student has written the decimal 0.25 as a fraction using the following solution path.

$$\begin{aligned} 0.25 &= \frac{25}{100} \\ \frac{25}{100} &= \frac{1}{4} \end{aligned}$$

- How would I explain why the student has chosen 100 to be the denominator of the fraction at this step of their solution?

$$\begin{aligned} 0.25 &= \frac{25}{100} \\ \frac{25}{100} &= \frac{1}{4} \end{aligned}$$



A classmate used the following calculation to illustrate how the fraction  $\frac{25}{100}$  was determined.

- How would I explain each step of their calculation?
- How does their calculation verify the fraction  $\frac{25}{100}$  is correct?

0.25 =  $\frac{25}{100}$

$\frac{2}{10} + \frac{5}{100}$   
 $\frac{20}{100} + \frac{5}{100}$   
 $\frac{20+5}{100} = \frac{25}{100}$

Continuing with the solution path...

- How would I describe what the student is doing at this step of their solution?
- How would I explain my thinking when determining the divisor used to perform this division step?

$0.25 = \frac{25}{100}$

$\frac{25}{100} = \frac{1}{4}$

$0.25 = \frac{25}{100}$

$\frac{25}{100} = \frac{1}{4}$



- How do I know when a fraction is written in simplest form or lowest terms?

$$0.25 = \frac{25}{100}$$
$$\begin{array}{r} \div 25 \\ \hline \frac{25}{100} = \frac{1}{4} \end{array}$$

Let's review...

- How would I summarize my solution path for writing a decimal as a fraction in simplest form?

$$0.25 = \frac{25}{100}$$
$$\begin{array}{r} \div 25 \\ \hline \frac{25}{100} = \frac{1}{4} \end{array}$$

How would I explain and demonstrate writing the decimal 0.9 as a fraction in simplest form?

How would I explain and demonstrate writing the decimal 0.162 as a fraction in simplest form?

## Writing Decimals as Fractions-Skills Checklist



I can explain and demonstrate how I determine the place value of a digit in a decimal number

I can explain and demonstrate how I use place value to write a decimal as a fraction out of 10, 100, or 1000

I can explain and demonstrate how I determine the Greatest Common Factor for two or more numbers

I can explain and demonstrate how I write a fraction in simplest form

# Writing Decimals as Fractions-Worksheet



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