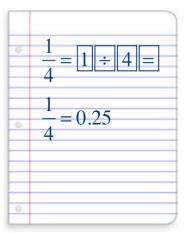
Writing Fractions as Decimals

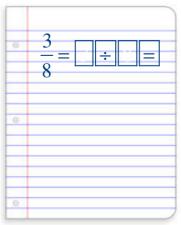
In this tutorial, we'll explore solution paths for writing fractions as decimals.

A student has written a fraction as a decimal using a calculator.

 How would I explain the student's thinking as they perform the steps of their solution path?

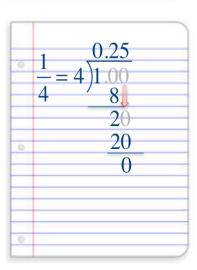


 How would I explain and demonstrate using my calculator to solve a similar problem?



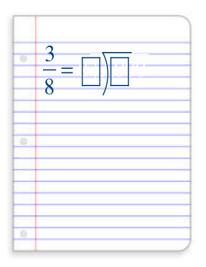
If I did not have a calculator... I could write a fraction as a decimal using long division.

- How would I explain my thinking as I rewrite my fraction in preparation for performing the long division?
- How would I explain the calculations performed using the *long division* approach to solving this problem?



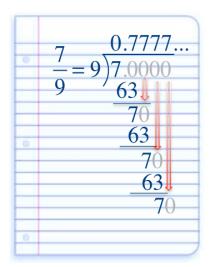






A classmate used *long division* to write the fraction $\frac{7}{9}$ as an equivalent decimal.

• How would I describe what happens as the division is performed in this example?



How could I distinguish between the decimal equivalents of each fraction shown below?

$$\frac{1}{4} = 4) 1.00$$

$$\frac{1}{8} = 20$$

$$\frac{20}{0} = 0$$

$$\frac{7}{9} = 9)7.0000$$

$$\frac{63}{70}$$

$$\frac{63}{70}$$

$$\frac{63}{70}$$

$$\frac{63}{70}$$

Another student has determined the decimal equivalent of a fraction using a different approach.

• How would I explain their approach to solving?

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

• If I choose this approach for writing a fraction as a decimal... will my *equivalent fraction* always have the denominator 100?

 $25 \div 100 = 0.25$

How would I determine if it's possible to write an equivalent fraction for 3/8 using the denominator 10, 100, or 1000?

 $\frac{3}{8} = \frac{\square}{\square}$

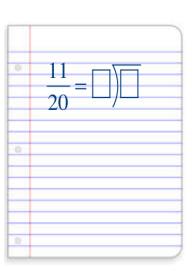
 How does my equivalent fraction simplify how I determine the decimal equivalent?



How would I explain and demonstrate using an *equivalent* fraction approach to calculate $\frac{11}{20}$ as a decimal value?

0	11
	20 = =
8	
0	

How would I explain and demonstrate using *long division* to calculate $\frac{11}{20}$ as a decimal value?



How would I explain and demonstrate using my *calculator* to write $\frac{11}{20}$ as a decimal value?

. 6	$\frac{11}{20} = \boxed{\div} \boxed{=}$
0	
0	

Writing Fractions as Decimals-Skills Checklist



☑ I can explain and demonstrate how I use a calculator to determine the decimal equivalent of a fraction

☑I can explain and demonstrate how I use long division to write the decimal equivalent of a fraction

☑I can explain and demonstrate how I use equivalent fractions to write a fraction as a decimal



Writing Fractions as Decimals-Worksheet



