

## **SOL 5.2a Converting decimals into fractions or fractions into decimals.**

**What you need to know:** How to change a fraction into a decimal number, and how to read a decimal number as a fraction.

### **Key Vocabulary:**

- 1) Divisor- The number you are dividing into another number
- 2) Dividend- The number being divided
- 3) Quotient –The answer to a division problem
- 4) Numerator-The top number in a fraction
- 5) Denominator- The bottom number in a fraction

**How to do it:** (Converting a fraction into a decimal)

Step 1: Write out the fraction as a division problem, dividing the bottom number into the top number

Step 2: Put a decimal point, then three zeroes, behind the top number, which is now the dividend.

Step 3: Divide the two numbers.

Step 4: Your answer is the fraction in decimal form

### **Example of converting a fraction to a decimal number.**

1) Convert  $\frac{1}{4}$  to a decimal number.

Step 1. Write out the problem as 4 divided into 1.

$$\begin{array}{r} 0.250 \\ 4 \overline{) 1.000} \\ \underline{-08} \end{array}$$

Step 2. Place a decimal point and three zeroes behind the 1.

$$20$$

Step 3. Divide 4 into 1.000

$$\underline{-20}$$

$$0$$

Step 4. Your answer is 0.250, or 0.25. So  $\frac{1}{4}$  is equal to 0.25!

## Examples of converting a fraction to a decimal number.

1) Convert  $\frac{5}{8}$  into a decimal number.

Step 1. Write out the problem as 8 divided by 5.

Step 2. Place a decimal point and three zeroes behind the 5.

Step 3. Divide 8 into 5.000

Step 4. Your answer is 0.625. So  $\frac{5}{8}$  is equal to 0.625!

$$\begin{array}{r} \underline{0.625} \\ 8 \overline{) 5.000} \\ \underline{-8} \phantom{00} \\ 20 \phantom{0} \\ \underline{-16} \phantom{0} \\ 40 \\ \underline{-40} \\ 0 \end{array}$$

2) Convert  $\frac{1}{3}$  into a decimal number.

Step 1. Write out the problem as 3 divided by 1.

Step 2. Place a decimal point and three zeroes behind the 1.

Step 3. Divide 3 into 1.000

Step 4. Your answer is 0.333 or 0.3. So  $\frac{1}{3}$  is equal to 0.333 or 0.3

$$\begin{array}{r} \underline{0.333} \\ 3 \overline{) 1.000} \\ \underline{-09} \phantom{00} \\ 10 \phantom{0} \\ \underline{-09} \phantom{0} \\ 10 \\ \underline{-09} \\ 1 \end{array}$$

\*when a number repeats over and over again like this problem, the answer can be written with a line over the answer, which means that the same number is repeating over and over.

**How to do it:** (converting a decimal number into a fraction)

Step 1: Read the decimal number.

Step 2: Find the place value where the number ends,  
This is the bottom number (denominator)

Step 3: The decimal number itself is the top number

Step 4: Write out the top and bottom number

**Examples of converting a decimal number to a fraction:**

1) change 0.7 to a fraction

Step 1. Read this as zero and seven tenth.

Step 2. Note the word tenth. This tells you the denominator will be a ten. The denominator ends in th .

Step 3. The word before the th ending word is the numerator. So seven would be the numerator.

Step 4. If the fraction can be reduced, please do it. It can not be reduced in this problem, so your answer is

2) Change 0.25 to a fraction

Step 1. Read this as zero and twenty-five hundredth.

Step 2. Note the word hundredth. This tells you the denominator will be one hundred. The denominator ends in th.

Step 3. The word before the th ending is the numerator. So twenty-five would be the numerator.

Step 4. The fraction can be reduced to  $\frac{1}{4}$  . So  $\frac{1}{4}$  is your final answer.

SOL 5.2a TEI Paper-Pencil Practice

1. Identify the decimal value that is equivalent to each fraction.

Fraction Value	Decimal value
$\frac{1}{5}$	
$\frac{1}{2}$	
$\frac{2}{5}$	
$\frac{3}{10}$	

0.5	0.4	0.3	0.2
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2. What is the decimal equivalent of  $\frac{3}{8}$  ?

3. What is the fractional equivalent of 0.7 ?

4. Identify the decimal value that is equivalent to each fraction.

Fraction Value	Decimal value
$\frac{3}{4}$	
$\frac{4}{5}$	
$\frac{1}{4}$	
$\frac{2}{3}$	

0.25	0.75	0.66	0.8
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5. What is the decimal equivalent of  $\frac{4}{9}$ ?