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| Name: | Class: | Date: |

**2.7 Writing Decimals as Fractions**

Recall from last class:

 9/10 = 0.9 How did we know this? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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This can also work the other way!

Consider the number 0.45

- How many places are in the decimal? So 0.45 =

- That is how many 0’s the fractions

 denominator should have.

Try the following decimals:

|  |  |  |
| --- | --- | --- |
| Decimal | Fraction | Fraction in Lowest terms |
| 0.6 |  |  |
| 0.45 |  |  |
| 0.375 |  |  |

Inquire:

1. Write 0.7 as a fraction in lowest terms.
2. Write 1.15 as a fraction in lowest terms.
3. Write 1.875 as a fraction in lowest terms.

**There is a specific process to determine the fraction of a repeating decimal**

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Example: Write 0.3 as a fraction

Step 1: Let F = 0.333…

 Multiply the numbers by a power of 10 so that if you

Step 2: 10F = 3.333… subtract the original number from the new number, all the

 repeating digits will cancel out.

Step 3: 10F = 3.333…

 - F 0.333… Subtract

 9F = 3

Step 4: 9F = \_3\_ Divide both equations so that F is isolated

 9 9

F = \_3\_ or \_1\_ in lowest terms

 9 3

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Practice: Write 3.8 as a fraction