

## Assignment 2.6: Fraction and decimal

Nickname \_\_\_\_\_

No. \_\_\_\_\_ M.1/6

### Convert decimal to fraction:

- **Step 1:** Write down the decimal divided by 1, like this:  $\frac{\text{decimal}}{1}$
- **Step 2:** Multiply both top and bottom by 10 for every number after the decimal point. (For example, if there are two numbers after the decimal point, then use 100, if there are three then use 1000, etc.)
- **Step 3:** Simplify (or reduce) the fraction

Ref: [www.mathsfun.com](http://www.mathsfun.com)

### Exercise

1. Write the following decimals as fractions.

- 1) 0.07 = \_\_\_\_\_      2) 0.3 = \_\_\_\_\_      3) 0.82 = \_\_\_\_\_
- 4) 0.012 = \_\_\_\_\_      5) 0.103 = \_\_\_\_\_      6) 0.00246 = \_\_\_\_\_
- 7) 1.5 = \_\_\_\_\_      8) 2.01 = \_\_\_\_\_      9) 11.005 = \_\_\_\_\_

### Convert fraction to decimal

- **Step 1:** Find a number you can multiply by the bottom of the fraction to make it 10, or 100, or 1000, or any 1 followed by 0s.
- **Step 2:** Multiply both top and bottom by that number.
- **Step 3:** Then write down just the top number, putting the decimal point in the correct spot (one space from the right hand side for every zero in the bottom number)

2. Write the following fractions as decimals. (Using multiple by numbers)

- 1)  $\frac{3}{2} = \frac{3 \times 5}{2 \times 5} = \frac{\quad}{10} = \frac{\quad}{10}$
- 2)  $\frac{8}{25} = \frac{8 \times \quad}{25 \times \quad} = \frac{\quad}{100} = \frac{\quad}{100}$
- 3)  $\frac{13}{20} = \frac{13 \times \quad}{20 \times \quad} = \frac{\quad}{100} = \frac{\quad}{100}$
- 4)  $\frac{3}{8} = \frac{3 \times \quad}{8 \times \quad} = \frac{\quad}{100} = \frac{\quad}{100}$

3. Write the following fractions as decimals. (Using long division)

Example: here is what long division of  $\frac{5}{8}$  looks like:

$$\begin{array}{r} 0.625 \\ 8 \overline{) 5.000} \\ \underline{0} \phantom{00} \\ 5.0 \phantom{0} \\ \underline{4.8} \phantom{0} \\ 20 \phantom{0} \\ \underline{16} \phantom{0} \\ 40 \phantom{0} \\ \underline{40} \\ 0 \end{array}$$

In that case we inserted extra zeros and did  $\frac{5.000}{8}$  to get **0.625**

1)  $\frac{1}{3}$

$$3 \overline{) 1.000}$$

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2)  $\frac{5}{6}$

$$6 \overline{) 5.000}$$

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