

2.1 Conversions between Decimals & Fractions

Note Title

Fractions: try to get denominator into a 10 or multiple of 10.

$$\begin{array}{l} \frac{1}{10} \rightarrow 0.1 \\ \frac{1}{100} \rightarrow 0.01 \end{array} \quad \begin{array}{l} \frac{3}{1,000} = 0.003 \\ \frac{-51}{10,000} \rightarrow -0.0051 \end{array}$$

$$\underline{\underline{\frac{9}{10}}} \leftrightarrow \frac{19}{10} = \underline{\underline{1.9}}$$

Ones to Remember:

$$\begin{array}{l} \frac{1}{3} = 0.\bar{3} \\ \frac{2}{3} = 0.\bar{6} \end{array} \quad \begin{array}{l} \frac{1}{4} = 0.25 \\ \frac{3}{4} = 0.75 \end{array}$$

You might need to make a larger or a smaller equivalent fraction before you can convert your fraction into a decimal.

$$\frac{-4 \times 2}{5 \times 2} \rightarrow \frac{-8}{10} \rightarrow -0.8$$

$$\frac{13 \times 5}{20 \times 5} \rightarrow \frac{65}{100} \rightarrow 0.65$$

↑ ↑
tenths hundredths

$$\text{or } \frac{13 \div 2}{20 \div 2} = \frac{6.5}{10} \rightarrow 0.65$$

↑
decimal moved 1 spot.

$$\frac{16 \div 4}{40 \div 4} = \frac{4}{10} = 0.4$$

$$\frac{24 \div 12}{36 \div 12} = \frac{2}{3} = 0.\bar{6}$$

$$\begin{array}{r} 13 \\ \times 5 \\ \hline 65 \end{array}$$