

Decimals

How do I change a fraction to a decimal?

All you have to do is *divide* the **numerator** (top number) of the fraction by the **denominator** (bottom number).

Example $\frac{5}{8}$

To change this fraction to a decimal, simply divide the numerator (5) by the denominator (8):

$$5 \div 8 = \mathbf{0.625}$$

You can check your work if you would like to. First, write 0.625 as a fraction. Then see if you can reduce it to $\frac{5}{8}$. If this happens you know you did it correctly.

$$\text{Check: } 0.625 = \frac{625}{1000} = \frac{125}{200} = \frac{25}{40} = \frac{5}{8}$$

Example $3\frac{1}{4}$

You don't have to deal with the whole number 3, since it is going to stay a whole number. As before, change the fraction to a decimal, by dividing the numerator (1) by the denominator (4):

$$1 \div 4 = \mathbf{0.25}$$

Combine the whole number with the decimal portion to get: **3.25**

Example $\frac{1}{3}$

To change this fraction to a decimal, simply divide the numerator (1) by the denominator (3):

$$1 \div 3 = \mathbf{0.333\dots}$$

This is what is called a repeating decimal. It goes on forever. Use three consecutive periods (...) to show that the decimal repeats.

Note: You can also write a repeating decimal by putting a bar over the portion that repeats: $0.\overline{3}$