

Equivalent Fractions

Equivalent Fractions are fractions that are the **same size**.

To change a fraction to an equivalent fraction in **higher terms....**

multiply the numerator and the denominator by the same number

$$\frac{3}{4} = \frac{?}{8}$$

think $4 \times 2 = 8$

So multiply the numerator and denominator by 2

$$\frac{3 \times 2}{4 \times 2} = \frac{6}{8}$$

$$4 \times 2 = 8$$

You need to use **equivalent fractions** or fractions that have the same value to add or subtract fractions.

Let's make some equivalent fractions

$$\frac{5}{8} = \frac{5 \times 2}{8 \times 2} = \frac{10}{16}$$

$$\frac{3}{4} = \frac{4 \times 3}{4 \times 4} = \frac{12}{16}$$

You can also use **LOWEST COMMON DENOMINATOR (LCD)** to write equivalent fractions

Use the LCD to write equivalent fractions for $\frac{1}{2}$ and $\frac{2}{5}$.

List several multiples for each denominator.

Multiples of 2:

2 4 6 8 10 12

Multiples of 5:

5 10 15 20 25

Find the LCD. It is the smallest number that appears on both lists.

The LCD of $\frac{1}{2}$ and $\frac{2}{5}$ is 10.

Write equivalent fractions.

$$\frac{1}{2} = \frac{1 \times 5}{2 \times 5} = \frac{5}{10}$$

$$\frac{2}{5} = \frac{2 \times 2}{5 \times 2} = \frac{4}{10}$$

Let's write some equivalent fractions using LCD

$$\frac{5}{8} = \frac{5 \times 2}{8 \times 2} = \frac{10}{16} \quad \frac{3}{4} = \frac{4 \times 3}{4 \times 4} = \frac{12}{16}$$

$$\frac{2}{5} = \frac{?}{15}$$

$$\frac{3}{9} = \frac{6}{?}$$