Getting equivalent Fractions and Reducing Fractions

Once we have found the LCD for a set of fractions, the next step is to change each fraction to one of its equivalents so that we may add or subtract it.

An equivalent fraction has the same value as the original fraction…it looks a little different!

Here are some examples of equivalent fractions:

$\frac{1}{2}=\frac{2}{4}$ $\frac{1}{2}=\frac{3}{6}$ $\frac{1}{2}=\frac{4}{8}$ $\frac{1}{2}=\frac{5}{10}$ …etc.

$\frac{2}{3}=\frac{4}{6}$ $\frac{2}{3}=\frac{6}{9}$ $\frac{2}{3}=\frac{8}{12}$ $\frac{2}{3}=\frac{10}{15}$ …etc.

An equivalent fraction is obtained by multiplying both the numerator and denominator of the fraction by the same number. This is called **BUILDING**. Here are some examples:

$\frac{5x3}{8x3}=\frac{15}{24}$ 5 and 8 were both multiplied by 3

$\frac{7x2}{12x2}=\frac{14}{24}$ 7 and 12 were both multiplied by 2

$\frac{1x17}{3x17}=\frac{17}{51}$ 1 and 3 were both multiplied by 17

Note: the numbers used to multiply look like fraction versions of 1.

An equivalent fraction can also obtained by dividing both the numerator and denominator of the fraction by the same number. This is called **REDUCING**.

Here are some more examples:

$\frac{10 \div 2}{12 \div 2}=\frac{5}{6}$ 10 and 12 were both divided by 2

$\frac{8 \div 4}{12 \div 4}=\frac{2}{3}$ 8 and 12 were both divided by 4

$\frac{200 \div 25}{225 \div 25}=\frac{8}{9}$ 200 and 225 were both divided by 25