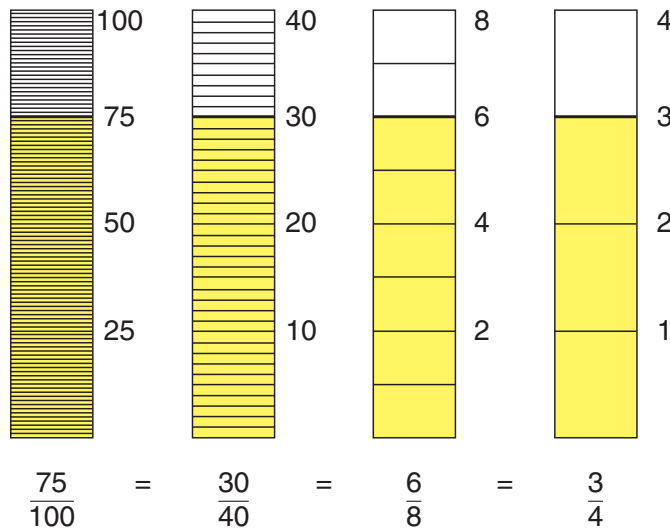




Appendix A: Finding Lowest Terms

Fractions like: $\frac{75}{100}$, $\frac{30}{40}$, $\frac{6}{8}$ and $\frac{3}{4}$ all represent the same part of a whole.

These are called equivalent fractions.



The fraction with the smallest numerator (top) and denominator (bottom) is said to be in **lowest terms**.

The fraction $\frac{3}{4}$ is in lowest terms.

$\frac{75}{100}$, $\frac{30}{40}$ and $\frac{6}{8}$ can be reduced to lowest terms by dividing their *numerators* and *denominators* by the *greatest common divisor* (GCD).

The **greatest common divisor** is the largest number that divides exactly into two numbers.

Example 1: The greatest common divisor of 75 and 100 is 25.

The fraction $\frac{75}{100}$ can be reduced to lowest terms by dividing 75 and 100 by 25.

$$\frac{75}{100} = \frac{75 \div 25}{100 \div 25} = \frac{3}{4} \quad (\text{lowest terms})$$



Reducing a fraction to lowest terms can be done in stages by dividing the numerator and denominator by any divisor.



Example 2: $\frac{60}{80}$ can be written in lowest terms by first dividing the numerator and denominator by the divisor 10.

$$\frac{60}{80} = \frac{60 \div 10}{80 \div 10} = \frac{6}{8}$$

The numerator and denominator can be further divided by the divisor 2.

$$\frac{6}{8} = \frac{6 \div 2}{8 \div 2} = \frac{3}{4} \quad \text{(lowest terms)}$$



To find a divisor of a number remember:

Numbers ending in 0, 2, 4, 6 or 8 (or any even number) can be divided by 2.
Numbers ending in 5 (for example: 35, 75 or 105) can be divided by 5.
Numbers ending in 0 (for example: 20, 60 or 90) can be divided by 10.
Numbers ending in 25, 50, 75 or 00 (for example: 200) can be divided by 25.



For ratios, the *left side* and *right side* can be divided by the same divisor.
This gives *equivalent* ratios.

Example 3: The ratio 15 : 45
 = 3 : 9 **Divide both 15 and 45 by 5**
 = 1 : 3 **Divide both 3 and 9 by 3**

For more on fractions see: **FRACTIONS: Step by Step**
available from **Core Learning** at www.core-learning.com