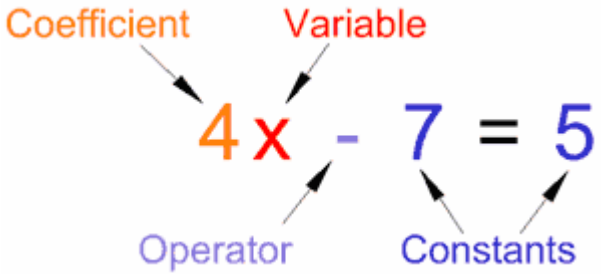
Resource: http://www.mathsisfun.com/algebra/definitions.html

Parts of an Equation

Here we have an equation that says 4x-7 equals 5, and all its parts:

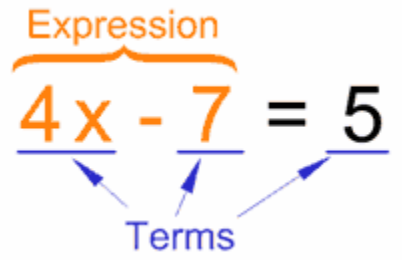


A **Variable** is a symbol for a number we don't know yet. It is usually a letter like x or y.

A number on its own is called a **Constant**.

A **Coefficient** is a number used to multiply a variable (4x means 4 times x, so 4 is a coefficient)

An **Operator** is a symbol (such as +, ×, etc) that represents an operation (ie you want to do something with the values).

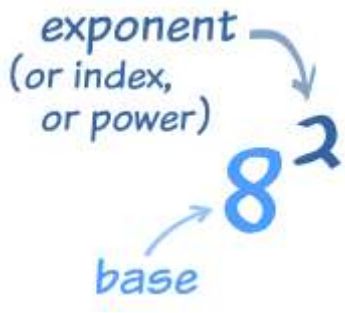


A **Term** is either a single number or a variable, or numbers and variables multiplied together.

An **Expression** is a group of terms (the terms are separated by + or - signs)

So, now we can say things like "that expression has only two terms", or "the second term is a constant", or even "are you sure the coefficient is really 4?"

Exponents



The exponent (such as the 2 in x^2) says **how many times** to use the value in a multiplication.

Examples:

$8^2 = 8 \times 8 = 64$

$y^3 = y \times y \times y$

$y^2z = y \times y \times z$

Exponents make it easier to write and use many multiplications

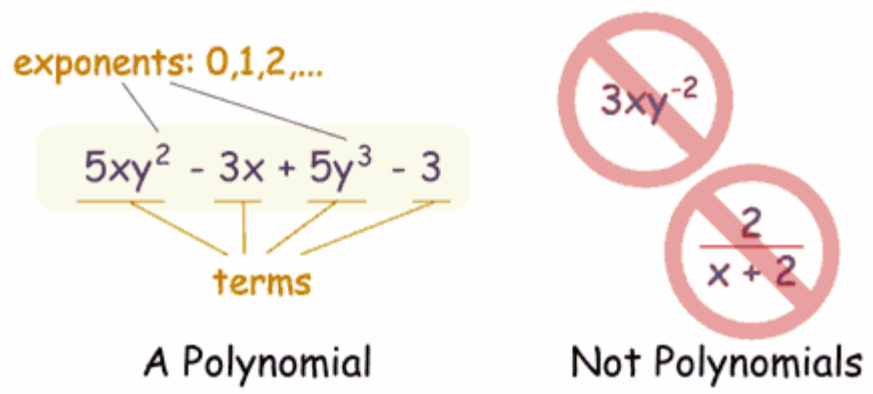
Example: $\mathbf{y^4z^2}$ is easier than $\mathbf{y \times y \times y \times y \times z \times z}$, or even **yyyyzz**

Polynomial

Example of a Polynomial: $\mathbf{3x^2 + x - 2}$

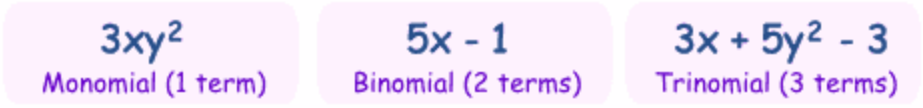
A polynomial can have **constants**, **variables** and the **exponents 0,1,2,3,...**

And they can be combined using addition, subtraction and multiplication, ... **but not division!**



Monomial, Binomial, Trinomial

There are special names for polynomials with 1, 2 or 3 terms:



Like Terms

Like Terms are **terms** whose variables (and their exponents such as the 2 in x^2) are the same.

In other words, terms that are "like" each other. (Note: the **coefficients** can be different)

Example:

$(1/3)xy^2$ $\quad$ $-2xy^2$ $\quad$ $6xy^2$

Are all **like terms** because the variables are all $\mathbf{xy^2}$