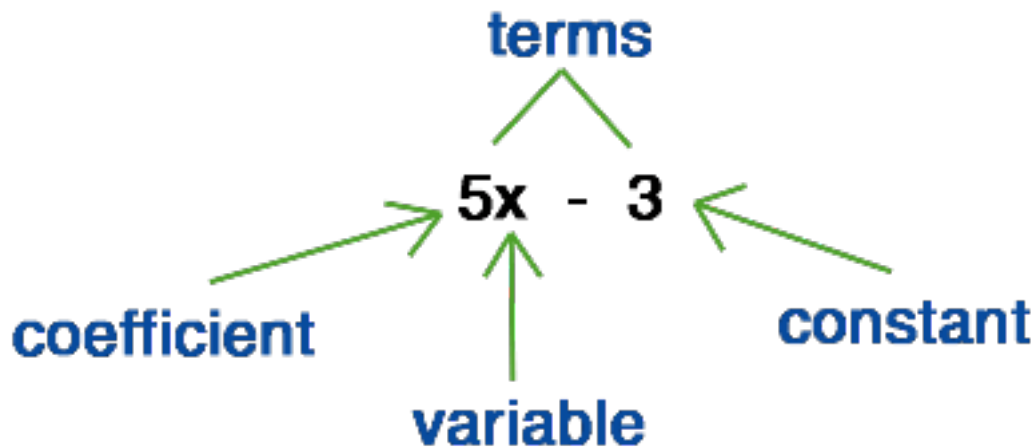


Variable: an unknown or changing number. Often represented by x .

Constant: a number that doesn't change.

Coefficient: the number that's multiplied by the variable.



We like terms, and we especially like *like* terms. **Like terms** are terms that have the same variables, including the exponents that go with those variables. The variables can be in different orders and have different coefficients, but they all need to be there.

Examples:

$3xy$ and $-5xy$ **are** like terms (same variables).

$3xy$ and $-5xym$ **are not** like terms (the second term has a variable that the first doesn't).

$-2m^2xh$ and $4m^2hx$ **are** like terms (same variables and exponents, just in different order).

$-2m^3xh$ and $4m^2xh$ **are not** like terms (the variable m has different exponents in each term).

If there's more than one term separated by plus or minus signs, then we have an **expression**. For example:

$$5x^2y - 3xy + y + 5$$

This expression has four terms: $5x^2y$, $-3xy$, y (or $1y$), and 5 .

Names for algebraic expressions

monomial	1 Term	xy
binomial	2 Terms	$xy - 2x$
trinomial	3 Terms	$xy - 2x + 3y$
quadnomial	4 Terms	$xy - 2x + 3y - 1$

Here is a chart of common phrases.

Common Words and Phrases for:

Add	Subtract	Multiply	Divide	Equals
plus add sum more than in addition to greater than total and	difference subtract less than take away	product of times twice ($\times 2$) factor	divided by quotient split share distribute	is

In these translations, we'll use the letter x to represent the variable, though any letter, symbol, or emoticon would work. Smiley faces and hearts, anyone?

Expression in Words	Expression in Symbols
a number increased by twelve	$x + 12$
the sum of twice a number and six	$2x + 6$
eighty less than a number	$x - 80$
twenty-eight split in half	$28 \div 2$
the product of a number and seven	$7x$
the quotient of a number and four	$x \div 4$
five greater than three times a number	$3x + 5$