Intro to expressions and variables

Expression

Expressions are made up of one or all of these:

- numbers (2 or 3 or 4)

- variables (P, x, y, z, or n)

- operations (+,-,x,/)

Expression Examples 1

let A be the number of apples I have

let B be the number of bananas.

A+B expresses the _____

B-A expresses _____

Expression Examples 2

Let C be the number of cheetos you eat each day.

3C would express_____

7C would express_____

Expression examples 3

Let p the number of pennies

Let n be the number of nickles

What could these expressions mean?

5n+p

6n+2p

n+p

Would an expression with any other operation besides adding make sense here?

Coefficient

Coefficients are the number part of the terms with variables.

In **3x + 2y + 7xy + 5**

the coefficient of the first term is 3
the coefficient of the second term is ____
the coefficient of the third term is _____

A word on expressions...

You cannot **solve** an expression

You can write an equivalent expression, though!

2p+p is equivalent to 3p

4m+3m is equivalent to 7m

Term

A small part of an expression or equation (often separated by addition or subtraction)

Example... in 3x+2 the terms are **3x** and **2**

What are the terms in:

4 + 2x + 7y

5x + 3 - 7

15 + 30 + 17 + 2y +3y

Combining like terms...

Combining Like Terms is a process used to simplify an expression or an equation using addition and subtraction of the coefficients of terms. Consider the expression below

$$5 + 7$$

By adding 5 and 7, you can easily find that the expression is equivalent to 12

"like terms"

How can we identify when a pair of terms are "like" .

The following are like terms because each term consists of a single variable, x, and a numeric coefficient.

2x, 45x, x, 0x, -26x, -x

Each of the following are like terms because they are all constants.

15, -2, 27, 9043, 0.6

Each of the following are like terms because they are all y2 with a coefficient.

3y2, y2, -y2, 26y2