ALGEBRAIC EXPRESSIONS (REVIEW)

An **algebraic expression** is a mathematical statement made up of _____ and _____.

1) Distributive Property (Rainbow)

**Only necessary when…_____

_____ **Remember –(x + 1) is the same as –1(x + 1)**

Simplify

a) $2(x + 1)$

b) $(2x – 7)6$

c) $2x – (x – 1)$

d) $3y + 6(2y + 1)$

e) $4x + (3x – 1)$

f) $-5(4x – 10)$

2) Collecting Like Terms

"**Like Terms**" have exactly the **same variable** raised to the **same exponent**. Simplify equations by collecting like terms. A simplified expression will have NO like terms.

Simplify

a) $2b + 7a + 8b – a + 3b^2$

b) $3 – x^2 + 2x + 3x^2 – 4 + 3x$

3) Exponents and Squaring

$y + y + y =$ **BUT** $(y)(y)(y) =$

Expand (and simplify c and d)

a) $a^3 =$

b) $2^3 =$

c) $(2y)^3 =$

d) $3x + (-3x)^2 – (x + 1)$

Exponent Rules:	$a^m + a^n = a^m + a^n$	$a^m \times a^n = a^{m+n}$	$(ab)^m = a^m b^m$
	$(a^m)^n = a^{mxn}$	$a^m \div a^n = a^{m-n}$	

4) Evaluating Algebraic Expressions

Substitute the value for the variable and solve.

Solve

a) $2x + 3$ For $x = 3$

b) $2x + 3$ For $x = -4$

c) $4x^2$ For $x = 2$

d) $(4x)^2$ For $x = 2$

5) Factors of Numbers

A factor is a _____ or _____ that divides _____ into another _____ or _____.

Solve

a) Factor 20	b) Factor 16	c) Factor -27	d) Factor -12

6) Integer Pairs

"**Sum**" means _____ "**Product**" means _____

Find two integers that that meet the requirements

a) Multiply to 24
Add to 11

b) Multiply to -36
Add to -9

c) Multiply to -12
Add to 4