Cycle 1 Day 5 **MBF 3CI CHAPTERS 4, 5, 7: RELATIONS** Date: Nov. 2/17

LEARNING TARGET:

"I can expand and simplify polynomials. I can common factor any polynomial."

A **term** is a number or variable, or a product of a number and a variable(s).
For example,

$2x^2y^1$

degree = 2 + 1 = 3

or $-3x^3y^2z^1$ degree = 6

A **polynomial** is an algebraic expression with terms that are added and/or subtracted.
For example,

3 1 2

$$2x^2y + 9y - 4y^2$$

A **monomial** is a polynomial with one term. For example, $2x^2y$

A **binomial** is a polynomial with two terms. For example, $2x^2y + 9y$

A **trinomial** is a polynomial with three terms. For example, $2x^2y + 9y - 4y^2$

$4a + 3a^2$ = Does Not Simplify

Only terms that are "like" each other can be simplified.

Simplify:

$2a + 4a = 6a$

$7c - 4c = 3c$

$6a + 3c$ = Does Not Simplify

$4x - 2x + x^2$

= $2x + x^2$

$4x^3 - 2x + x^2$

= Does Not Simplify

LESSON PART A: **E X P A N D I N G**

RECALL: $1x + 1x$

$= 2x$

$x^1 \times x^1$

$= x^{1+1}$

$= x^2$

FOIL

Expand and simplify:

$x(x-9)$

$= x^2 - 9x$

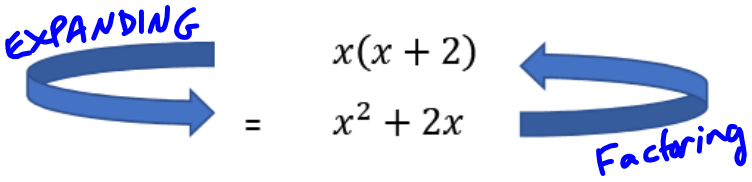
$(x+3)(x+2)$

$= x^2 + 2x + 3x + 6$

$= x^2 + 5x + 6$

PRACTICE PART A: p. 239 #3 and 4

LESSON PART B: **(FACT)(ORING)**



To **factor** a number or polynomial, means to find out what to multiply together to create the number or polynomial.

Factor fully:

a) $7x - 42$ $= 7(x-6)$

b) $9y^2 - 3y$ $= 3y(3y-1)$

c) $-7x^2y + 14xy$ $= -7xy(x-2)$

PRACTICE PART B: p. 233 #13 and p. 254 #6. *Are you done PART A from above?*

$\frac{7x}{7} - \frac{42}{7}$

$7(x-6)$

$3(3y^2 - y)$ or $y(9y-3)$ GCF