

## POLYNOMIALS

POLYNOMIAL:

4 or more terms.

MUST STILL MEET THESE CONDITIONS!

1. No Neg Exp.
2. No Rational Exp.

# Degree of a Polynomial

= to the highest degree of the monomial terms

Ex:  $6x^5y^1 + 4x^3y^2 - 12xy^3$

6      5      4

# Simplifying Polynomials

1. Distribute

2. Apply Exp. Rules

3. Like Terms

EX #1: SIMPLIFY

$$(x + 4)(x + 4)$$

$$x^2 + 4x + 4x + 16$$

$$x^2 + 8x + 16$$

DEGREE: 2, Trinomial

EX # 2: SIMPLIFY

$$(x - 4)(3x - y + 3)$$

$$\cancel{3x^2} - \cancel{xy} + \cancel{3x} - 12x + \cancel{4y} - 12$$

$$3x^2 - xy - 9x + 4y - 12$$

DEGREE: 2 / Polynomial

## EXAMPLES $(2x+5)(x+4)$

The sides of a rectangle have a length of  $x + 4$  units and a width of  $2x + 5$  units.

Which of the following represents the area of the rectangle?

a.  $2x^2 + 5x + 8x + 20$

b.  $3x + 9$

c.  $6x + 18$

d.  $2x^2 + 13x + 20$

$$2x^2 + 8x + 5x + 20$$

$$2x^2 + 13x + 20$$

$$2x + 5$$

$$x + 4$$

