Name: _____   Date: _____ Block: _____

Vocabulary

Polynomial: A _____ of monomials.

For example:

Binomial: A polynomial with _____ terms.

For example:

Distributive Property (FOIL): The rule that states _____ .

Question of the day – What does FOIL stand for?

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Example 1: Multiply Binomials

Determine each product. (Multiply and combine "like" terms)

a) (x - 3)(2x + 1)   b) (x - 2y)(x - 4y)

c) (x - 3)(x - 5)   d) (5m - 1)(2m - 6)

What are "like" terms?

Example 2: Multiply a Binomial and a Trinomial

Determine the product. (Multiply and combine like terms).

a) $(x + 2)(2x^2 - 5x + 1)$ 　　　　　　　　　　b) $(r - 4)(3r^2 + 8r - 6)$

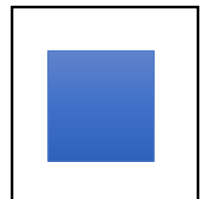## Example 3: Perform Operations on Products of Polynomials

Simplify.

a) $(x + 1)(5x + 3) + 3(2x + 4)(6x - 2)$ 　　　　b) $(x + 3)(5x – 2) + 4(x – 1)(2x + 5)$

Example 4: Apply Binomial Multiplication

The length of the blue square in the painting is unknown. The width of the border around the square is 30 cm. What is the total area of the painting if the square has an area of 3600 cm^2 ?

Homework:

P. 209 #1, 3, 4, 5, 6 (pick 3)

#7, 10, 11 (area of circle is πr^2), 12, 14

Note: Textbook will ask you to use algebra tiles → you do NOT need to