# SECTION 7.7

#### MULTIPLYING POLYNOMIALS

**SWBAT:** 

Multiply polynomials by using the distributive prop.Multiply binomials by using the FOIL method.

#### Multiplying a binomial by trinomial

Ex. 6 Multiply by using the Distributive Property \*make sure answer is in standard form  $(5+3x-x^2)(x-2) \leftarrow \text{split-up the binomial}$  $\chi(5+3\chi-\chi^2) - 2(5+3\chi-\chi^2)$  $(^{2})-X^{3}$  -10  $x^{3} + 5x^{2} - x - 10$ 

#### Multiplying a binomial by trinomial

Ex. 7 Multiply by using the Distributive Property \*make sure answer is in standard form

 $(3a + 4)(a^2 - 12a + 1)$  $3a(a^2-12a+1)$   $4(a^2-12a+1)$ 3a<sup>3</sup>(-3ba<sup>2</sup>(+3a) |4a<sup>2</sup>(-48a)+4 3a<sup>3</sup>-32a<sup>2</sup>-45a+4)

#### Multiplying a trinomial by trinomial

Ex. 8 Multiply by using the Distributive Property \*make sure answer is in standard form  $(2y^2 + 3y - 1)(3y^2 - 5y + 2)$  $2y^2(3y^2 - 5y + 2) + 3y(3y^2 - 5y + 2) - 1(3y^2 - 5y + 2)$  $6y^4 - 10y^3 + 4y^2 + 9y^3 - 15y^2 + 6y - 3y^2 + 5y - 2$ 

#### Multiplying a trinomial by trinomial

Ex. 9 Multiply by using the Distributive Property \*make sure answer is in standard form  $(2b^2 + 7b + 9)(b^2 + 3b - 1)$  $2b^{2}(b^{2}+3b-1)+7b(b^{2}+3b-1)+9(b^{2}+3b-1)$ 264 + 66 262 + 763 + 216 - 76 + 962 + 276 - 9  $2b^{4}+13b^{3}+28b^{2}+20b-9$ 

## PARCC Ex 1:

Write an expression for the area of a square with sides of length a + b. Use the distributive property to fully expand the expression. Show your work.



## PARCC Ex 2:



a) Create an expression that represents the perimeter of the rectangle above. Write the expression as a polynomial in standard form. b) Create an expression that represents the area of the rectangle above. Write the expression as a polynomial in standard form.

## Did We Reach Our Objective?

## Multiply polynomials by using the distributive prop

Multiply binomials by using the FOIL method.

## Homework



### Worksheet all