**Lesson 2-11: Multiplying and Dividing a Polynomials by a Constant**

Before we can multiply or divide by a constant we must recall what a constant is. So what is a constant?

Before we start multiplying polynomials by a constant we must recall what multiplication really means.

Explain 3$×$5

It’s the same when multiplying polynomials by a constant.

Multiply each of the following with tiles.

 2(3*x*) 3 (2*x* – 2)

 -2 (*x* + 1) -2( $2w^{2}-3$)

2(-$y^{2}+2y-1$)

To do this symbolically we use what is called distributive property where each term in the polynomial is multiplied by the constant.

2(3*x*) 3 (2*x* – 2)

 -2 (*x* + 1) -2( $2w^{2}-3$)

2(-$y^{2}+2y-1$)

Before we start dividing polynomials by a constant we must recall what dividing really means.

What does 15 ÷ 3 mean

It’s the same with polynomials.

Divide each polynomial using tiles

 



To divide symbolically just divide each term in the polynomial by the constant

 

 $\frac{-3m^{2}+ 15mn-21n^{2}}{-3}$

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Home-work Pg 246 # 5, 6, 11, 13, 22, and 23 (you can do them all symbolically or with tiles)