

Lesson 1.8- SWBAT multiply polynomial expressions.

Kickoff- Simplify each of the following

1)  $(3x+4)^2$   
 $(3x+4)(3x+4)$   
 $9x^2+12x+12x+16$   
 $9x^2+24x+16$

2) If  $(3x-1)(2x+5)$   
 $(3x-1)(2x+5)$   
 $6x^2+15x-2x-5$   
 $6x^2+13x-5$

3)  $(2x-1)(x^2-5)$   
 $2x^3-1x^2-10x+5$

4)  $3[x-4(2x+1)]$   
 $3+x(-8x-4)$   
 $3-8x^2-4x$   
 $-8x^2-4x-3$   
 $3[-8x-4]$   
 $3[-7x-4]$   
 $-21x-12$

\*\*\*Remember- when you multiply with the same variable you need to **ADD** your exponents!!!!\*\*\*

Practice: Simplify each of the following.

1)  $3-2(x+5)^2$   
 $3-2(x+5)(x+5)$   
 $3-2(x^2+5x+5x+25)$   
 $3-2(x^2+10x+25)$   
 $3-2x^2-20x-50$   
 $-2x^2-20x-47$

2)  $(x^2+2)(2x^2-5x+7)$   
 $2x^3-5x^2+7x+4x^2$   
 $-10x+14$   
 $2x^3-x^2-3x+14$

3)  $(3a-4)(-a^2+5a-1)$

4)  $(-7x-2)(-x^2+4x-6)$

5)  $(3x+9)(x^3-2x^2+4x+9)$

6)  $2-(x+3)(x^2+3x-1)$

7)  $(2x^2+7x+2)(3x^2-2x+1)$

8)  $(7k-3)(k^2-2k+7)$

$2x^2+7x+2$   
 $3x^2+6x^4+21x^3+6x^2$   
 $-2x^3-14x^2-4x$   
 $+1+2x^3+7x^2+2$   
 $6x^4+17x^3-6x^2+3x+2$