

In Class Notes Day 1

$$3x^4 + 2x^3 - 6x^2 + x - 15x^0$$

Use the distributive property to evaluate the following expressions.

1)  $5(7 + 10x)$

$$5 \begin{array}{|c|c|} \hline 7 & 10x \\ \hline \end{array} \quad \begin{array}{l} 35 + 50x \\ 50x + 35 \end{array}$$

2)  $a(a+2)$   
 $a^2 + 2a$

Find each product.

3)  $(k-1)(k-2)$

	$k$	$-2$	
$k$	$k^2$	$-2k$	$k^2 - 3k + 2$
$-1$	$-k$	$2$	

4)  $(b-2)(b+5)$   
 $b^2 + 5b - 2b - 10$   
 $b^2 + 3b - 10$

	$b$	$5$
$b$	$b^2$	$5b$
$-2$	$-2b$	$-10$

First  
Outside  
Inside  
Last

FoIL 5)  $(3a+1)(a-3)$   
 $3a^2 - 9a + a - 3$   
 $3a^2 - 8a - 3$

FoIL 6)  $(3n-2)(5n-2)$   
 $15n^2 - 6n - 10n + 4$   
 $15n^2 - 16n + 4$

Box 7)  $(x+8)(6x+5)$

	$6x$	$5$
$x$	$6x^2$	$5x$
$8$	$42x$	$40$

$6x^2 + 47x + 40$

Box & FoIL 8)  $(x-5)(x^2-x+7)$

	$x^2$	$-x$	$7$
$x$	$x^3$	$-x^2$	$7x$
$-5$	$-5x^2$	$5x$	$-35$

$x^3 - 6x^2 + 12x - 35$

$(x-5)(x^2-x+7)$   
 $x^3 - x^2 + 7x - 5x^2 + 5x - 35$   
 $x^3 - 6x^2 + 12x - 35$

Factor the common factor out of each expression. (always bring negative out if on largest exp.)

9)  $\frac{4x-2}{3}$   
 $2(2x-1)$

10)  $\frac{-6k^3-3k}{3}$   
 $-3k(2k^2+1)$

11)  $\frac{6x+10}{2}$   
 $2(3x+5)$

12)  $\frac{-12x^2+16}{4}$   
 $-4(3x^2-4)$

Simplify by eliminating grouping symbols and adding like terms.

$$13) (6p^3 + 5 + 2p^2) + (-2) + 7p^2$$

$$6p^3 + 9p^2 + 3$$

$$14) (2n^3 + 2n) - (6n - 7n^2 + 6n^3)$$

$$2n^3 + 2n - 6n + 7n^2 - 6n^3$$

$$-4n^3 + 7n^2 - 4n$$

$$15) (-3x - 8x^3) - (-x^2 + 6x - 6x^3)$$

$$-3x - 8x^3 + x^2 - 6x + 6x^3$$

$$-2x^3 + x^2 - 9x$$

$$16) (8a^3 + 3a^2 - 4) + (4 - 3a^3 + 5a^2)$$


$$5a^3 + 8a^2$$

Name each polynomial by degree and number of terms.

$$17) -3 + 6r^2$$

2nd degree  
2 terms

Quadratic Binomial




$$18) 2b^2$$

Quad. Monomial



$$19) 2k^3 - 3k^2$$

Cubic Binomial.



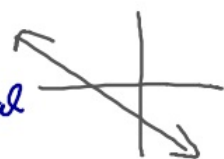
$$20) 4$$

Constant Monomial



$$21) -8 - 6m$$

Linear Binomial



$$22) -5 + 10p^3 - 6p$$

Cubic Trinomial

