

Aug 25-Math 2/2H

- Calculator Check
- Starter #2
- Calendar Math Pg. 1-2
- Questions on Homework
- 1.1 Multiply Polynomial-Finish the assignment

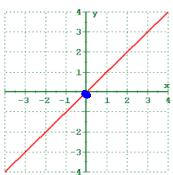
September Calendar Math Pg 1-2

Parent Functions:

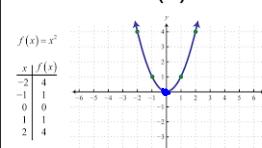
The basic function that is used to create more complicated functions.

Aug 25-6:47 AM

Aug 25-6:49 AM

Linear:  $f(x)=x$ 

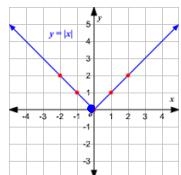
point of origin (0,0)  
vertex  
airplane

Quadratic:  $f(x)=x^2$ 

point of origin (0,0)  
vertex - bottom  
of the V

Aug 25-6:51 AM

Aug 25-6:52 AM

Absolute Value:  $f(x)=|x|$ 

point of origin (0,0)  
vertex



Homework Questions...

$$\textcircled{2} \quad -5x^3 + 4x^2 - x^4$$

yes

$$\textcircled{1} \quad x^4 - 5x^3 + 4x^2$$

Degree: 4<sup>th</sup>

LC: -1

Constant: None

Aug 25-6:53 AM

Aug 25-6:55 AM

$$(14) (-4x^2 - 2x + 5) - (?) = 6x^2 + 5x - 3$$

$$\begin{aligned} -4x^2 - \cancel{10x^2} &= 6x^2 \\ -4x^2 - \cancel{-10x^2} &= \boxed{-10x^2 - 7x + 8} \\ -2x - \cancel{5x} &= -3 \\ 5 - \cancel{8} &= -3 \end{aligned}$$

## 1.1 Multiply Polynomial

What do you do when you multiply:

$$x^1 \cdot x^1 = x^2$$

$$x^1 \cdot x^2 = x^3$$

$$3x^2 \cdot 5x^4 = 15x^6$$

Rule: Add the powers with the same variable, multiply the coefficients

Aug 25-8:48 AM

Aug 25-6:55 AM

Multiply with a single term out front:

$$\text{Ex 1)} 4d(5d + 6) \quad \text{distribute}$$

$$20d^2 + 24d$$

$$\begin{array}{r} 5d + 6 \\ \hline 4d | 20d^2 \quad 24d \\ \hline 20d^2 + 24d \end{array}$$

## Homework #15

$$5r^2(5r - 8)$$

$$\begin{array}{r} 5r \quad -8 \\ \hline 5r^2 | 25r^3 - 40r^2 \\ \hline 25r^3 - 40r^2 \end{array}$$

Aug 25-6:56 AM

Aug 25-6:57 AM

$$\text{Ex 2)} 3ab^2(8a^4 - 7a^2b + 4a^4b^7)$$

$$\begin{array}{r} 8a^4 - 7a^2b \quad 4a^4b^7 \\ \hline 3ab^2 | 24a^5b^2 - 21a^3b^3 + 12a^5b^9 \\ \hline 24a^5b^2 - 21a^3b^3 + 12a^5b^9 \end{array}$$

How to multiply a multi-term: Box Method  
Ex 3)  $(y-6)(y+4)$

$$\begin{array}{c} y \quad 4 \\ \hline y^2 \quad 4y \\ -6 \quad -6y \quad -24 \\ \hline \end{array}$$

outty inny

$$y^2 + 4y - 6y - 24$$

$$y^2 - 2y - 24$$

Aug 25-6:57 AM

Aug 25-6:58 AM

Ex 4)  $(4m+2n)(6-3n)$

⑧  $((6r-5)^2 - 36r^3 + 25)$   
 $(6r-5)(6r-5)$

Aug 25-6:59 AM

Aug 25-9:15 AM

Ex 5)  $(6y^3 - 2y^2 + 5y)(7y^3 + 8)$

Homework #20

$$(x^2 - 7x + 5)(7x^2 + 7x - 6)$$

$x^2 - 7x + 5$			
$7x^2$	$7x^4$	$-49x^3$	$35x^2$
$7x$	$7x^3$	$-49x^2$	$35x$
$-6$	$-6x^2$	$42x$	$-30$

$$7x^4 - 49x^3 + 35x^2 + 7x^3 - 49x^2 + 35x - 6x^2 + 42x - 30$$

$$7x^4 - 42x^3 - 20x^2 + 77x - 30$$

Aug 25-6:59 AM

Aug 25-6:59 AM

Function Notation:

$f(x) \cdot g(x)$

$$\frac{f(x)}{(x+3)} \cdot \frac{g(x)}{(x^2 - 3x)}$$

$\text{Ex 7) } f(x) = x+3$

$g(x) = x^2 - 3x$

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

Now try Ex 6)

$g(x) = -4x$

$f(x) = -x^2 + 3x$

$\text{Find } g(x) \cdot f(x)$

Aug 25-6:59 AM

Aug 25-7:00 AM

Homework #21  
 $f(n) = n^3 + 4$   
 $g(n) = 2n + 3$   
 Find  $f(n) \cdot g(n)$

Aug 25-7:01 AM

Review: Greatest Common Factor, GCF  
 The term that will divide evenly into every term  
 21, 14     $\frac{21}{14} : 3 \cdot 7$   
 $\frac{14}{14} : 2 \cdot 7$   
 GCF = 7

Aug 25-7:01 AM

$$7x^2, 14x^4$$

$$7x^2 \cdot 0 \otimes \otimes$$

$$14x^4 \cdot 2 \otimes \otimes \times \times$$

$$\boxed{7x^2}$$

Aug 25-9:39 AM

Homework #17  
 $(3n+8)(3n+8)$

3n	+8
9n <sup>2</sup>	24n
-8	-64
9n <sup>2</sup> - 64	

Aug 25-6:58 AM

(23) 24, 36

$$24 \cdot 4 \cdot 6 = (2 \cdot 2 \cdot 2 \cdot 3) \cdot (2 \cdot 3 \cdot 2)$$

$$36 \cdot 6 \cdot 6 = (2 \cdot 3 \cdot 2) \cdot (2 \cdot 3 \cdot 2)$$

$$2 \cdot 3 \cdot 2$$

$$\boxed{12}$$

Aug 25-9:42 AM

Homework:

- Calculator
- Disclosure Signature: online only
- Finish 1.1 Polynomial Worksheet

Aug 25-7:02 AM