

4.2 A Translating into Standard Form finished

1. If you were a vending machine what you dispense?
2. What do you want to be when you grow up?
3. What is 1 thing you did during break?
4. Describe your best friend?
5. What song would you sing at Karaoke night?
6. What would be your Ideal Vacation?

Jan 3-9:19 AM

Write an Equation
of the graph Below

$$y = a(x-h)^2 + k$$

(1, -9)

$x=1$
 $x-1$

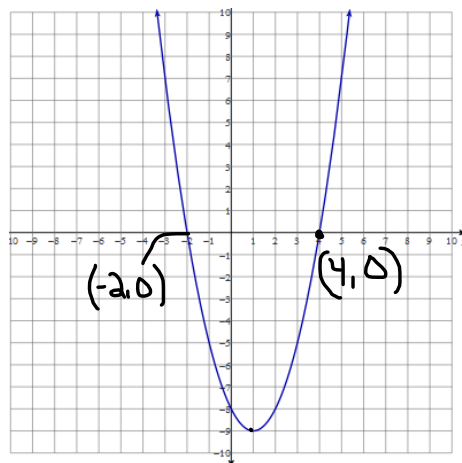
• $y = (x-1)^2 - 9$

$(-2, 0) (4, 0)$

$x = -2 \quad x = 4$

$x+2=0 \quad x-4=0$

• $y = (x+2)(x-4)$



$y = ax^2 + bx + c$

• $y = x^2 - 2x - 8$

$c = -8$

$x = \frac{-b}{2a} = 1$

$\frac{2}{2}$

$b = -2$
 $a = 1$

Feb 11-9:11 AM

Learning Target

Topic: Intercept/Factored Form to Standard

4.2 How can I translate Quadratic Equations from factored and Vertex forms into standard form

Sep 10-12:24 PM

Our Goal:

Plug these into your graphing Calc


Intercept (factored)

$$y = 2(x - 3)(x + 2)$$


Vertex

$$y = 2(x + 1)^2 - 3$$

Standard

$$y = 2x^2 - 2x - 12$$


Standard

$$y = 2x^2 + 4x - 1$$


Dec 18-9:16 AM

4.2 A Translating into Standard Form finished

Review:

$$4(1 - 2x)$$

$$4(1) \quad 4(-2x)$$

$$4 - 8x$$

$$5x(2x+5)$$

$$10x + 25x \quad [35x]$$

$$10x + 25$$

$$10x^2 + 25x$$

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

$$-3x(2) \quad -3x(7x)$$

$$-6x \quad -21x^2$$

$$\begin{aligned} x^2 + x^2 &= 2x^2 \\ x^2 \cdot x^2 &= x^4 \\ x \cdot x \cdot x \cdot x &= x^4 \end{aligned}$$

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

$$3x^2(2x^2) \quad 3x^2(-3x) \quad 3x^2(4)$$

$$6x^4 - 9x^3 + 12x^2$$

Nov 3-9:52 AM

$$y = (x + 3)(x - 6)$$

How should we multiply??

①

$$y = x(x) \quad x(-6) \quad 3(x) \quad 3(-6)$$

$$y = x^2 - 6x + 3x - 18$$

$$y = x^2 - 3x - 18$$

Sep 10-12:57 PM

2 Binomials...

$$y = (x + 3)(x - 6)$$

	x	$+3$	
x	x^2	$3x$	$y = x^2 - 3x - 18$
-6	$-6x$	-18	

Feb 10-12:51 PM

$$f(x) = (2x + 3)(5x + 1)$$

$$\begin{array}{l}
 2x(5x) \quad 2x(1) \quad 3(5x) \quad 3(1) \\
 10x^2 \quad 2x \quad 15x \quad 3 \\
 y = 10x^2 + 17x + 3
 \end{array}$$

	$2x$	$+3$	
$5x$	$10x^2$	$15x$	$y = 10x^2 + 17x + 3$
$+1$	$2x$	3	

Sep 12-12:21 PM

4.2 A Translating into Standard Form finished

$$y = (3y - 5)(3y + 5)$$

$3y$	$9y^2$	$-15y$
$+5$	$15y$	-25

$$y = 9y^2 - 25$$

Sep 12-12:22 PM

$$y = 2(3x + 4)(x - 3)$$

$$y = 2(3x^2 - 5x - 12) \times$$

$3x$	4
$3x^2$	$4x$
-3	-12

$$y = 6x^2 - 10x - 24$$

Sep 12-12:23 PM

4.2 A Translating into Standard Form finished

$$y = -3(x + 8)(x - 7)$$

$$y = -3(x^2 + 1x - 56) \quad \begin{array}{l} x(x) \quad x(-7) \quad 8(x) \quad 8(-7) \\ x^2 \quad -7x + 8x \quad -56 \end{array}$$

$$y = -3x^2 - 3x + 168$$

Dec 5-8:54 AM

Find the product.

$$(5x^2 - x - 3)(6x - 5)$$

Sep 12-12:22 PM

Find the product. FOIL

$$f(x) = (x + 4)^2$$

$$f(x) = (x + 4)(x + 4)$$

$$f(x) = x(x) \quad x(4) \quad 4(x) \quad 4(4)$$

$$f(x) = x^2 + 4x + 4x + 16$$

$$f(x) = x^2 + 8x + 16$$

Sep 12-12:24 PM

Learning Target

Topic: Vertex Form to Standard

4.2 How can I translate Quadratic Equations from factored and Vertex forms into standard form

$$y = a(x - g)(x - r)$$

$$y = a(x - h)^2 + k$$

Jan 5-9:35 AM

4.2 A Translating into Standard Form finished

Translate into Standard form

$$f(x) = (x + 5)^2$$

$$f(x) = (x + 5)(x + 5)$$

$$f(x) = x^2 + 10x + 25$$

Jan 5-9:35 AM

Translate into Standard form

$$f(x) = (x - 3)^2 - 9$$

$$f(x) = (x - 3)(x - 3) - 9$$

$$f(x) = x^2 - 6x + 9 - 9$$

$$f(x) = x^2 - 6x$$

Jan 5-8:11 AM

4.2 A Translating into Standard Form finished

Translate into Standard form

$$f(x) = 4(x - 6)^2$$

$$f(x) = 4(x - 6)(x - 6)$$

$$f(x) = 4(x^2 - 12x + 36)$$

$$f(x) = 4x^2 - 48x + 144$$

Jan 5-9:36 AM

Translate into Standard form

$$f(x) = 2(x + 1)^2 + 11$$

$$f(x) = 2(x + 1)(x + 1) + 11$$

$$f(x) = 2\{x(x) \quad x(1) \quad 1(x) \quad 1(1)\} + 11$$

$$f(x) = 2[x^2 + 2x + 1] + 11$$

$$f(x) = 2x^2 + 4x + 2 + 11$$

$$f(x) = 2x^2 + 4x + 13$$

Jan 5-9:36 AM

4.2 A Translating into Standard Form finished

Write an equation in standard form that has x intercepts $x = 3, -2$

Jan 5-8:12 AM

Jan 5-10:02 AM