Warm up

Solve by factoring

$6x^2 - 7x - 5 = 0$

3	-5
2	1

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

$3x-5=0$ $+5+5$ $\frac{3x}{3}=\frac{5}{3}$ $x=\frac{5}{3}$

$2x+1=0$ $-1-1$ $\frac{2x}{2}=\frac{-1}{2}$ $x=-\frac{1}{2}$

Solve Using the Quadratic formula

$2x^2+3x+7=0$

$3x + 7 + 2x^2 = 0$

$x=\frac{-3\pm\sqrt{(3)^2-4(2)(7)}}{2(2)}$ $9-56$ -47

$x=\frac{-3\pm\sqrt{-47}}{4}$ $=\sqrt{-1}\sqrt{47}$

$x=\frac{-3\pm i\sqrt{47}}{4}$

Please pull out HW and put it on your desk

November 14, 2018

4-5 Building Quadratic Equations form Zeros

Objective: I can write a Quadratic equation in standard form.

Objective: I can create a Quadratic equation from its zeros.

Objective: I can identify the zeros of a Quadratic equation on a graph.

What does a Quadratic equation look like in standard form?

$3x^2 - 4x - 20 = 0$

$(3x - 4)(2x + 5) = 0$

$6x^2 + 15x - 8x - 20$

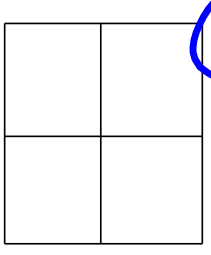
$6x^2 + 7x - 20$

	$3x$	-4
$2x$	$6x^2$	$-8x$
$+5$	$15x$	-20

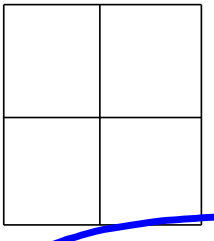
Write the equation in standard form

$(x + 2)(x - 7) = 0$

$x^2 - 5x - 14 = 0$



$(3x - 4)(5x + 2) = 0$



$15x^2 - 14x - 8 = 0$

Using the roots of a quadratic write the equation in standard form.

x = 3

x = -1

$x = 3$ $\quad x = -1$

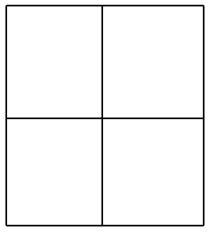
$-3 \qquad +1$

$x - 3 = 0 \quad x + 1 = 0$

$(x-3)(x+1) = 0$

$x^2 + 1x - 3x - 3 = 0$

$x^2 - 2x - 3 = 0$

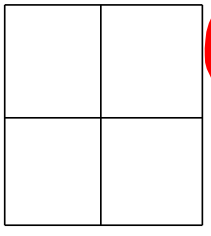


You try :)

x = -5 $x+5=0$

x = 4 $x-4=0$

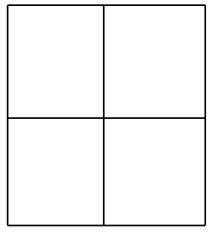
$(x+5)(x-4)=0$



$x^2+x-20=0$

x = 2 $x-2=0$

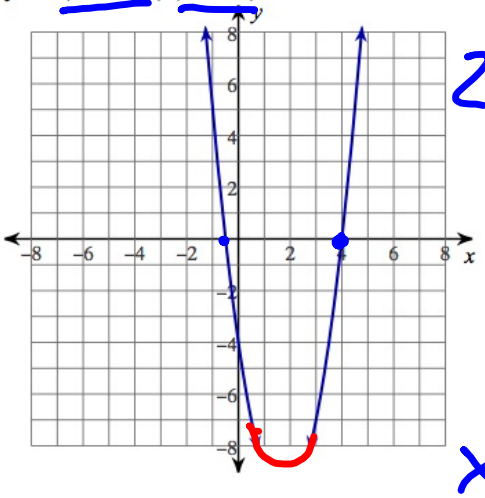
x = 1 $x-1=0$



$x^2-3x+2=0$

Given the graph we want to identify the zeros

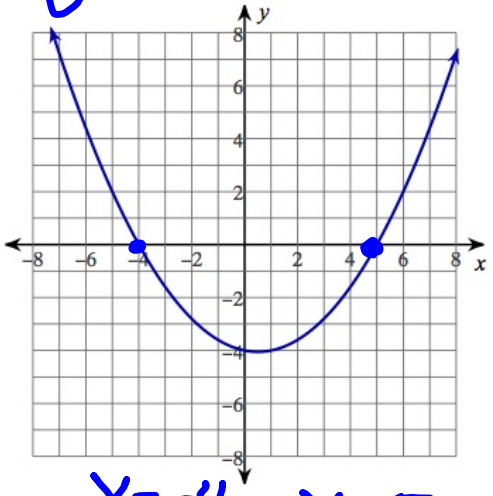
$y = (2x + 1)(x - 4)$



$2x+1=0$
$-1\ -1$
$\frac{2x}{2} = \frac{-1}{2}$
$x = -\frac{1}{2}$

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

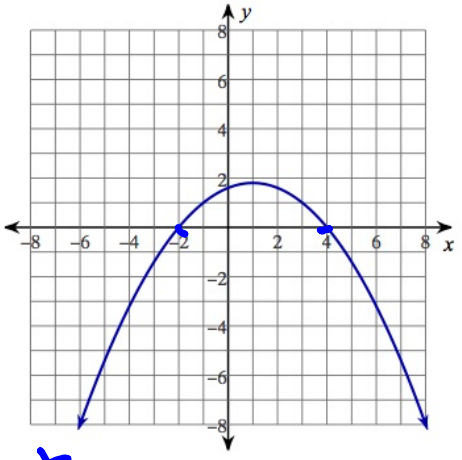
$y = \frac{1}{5}(x + 4)(x - 5)$



$x=-4$ $x=5$

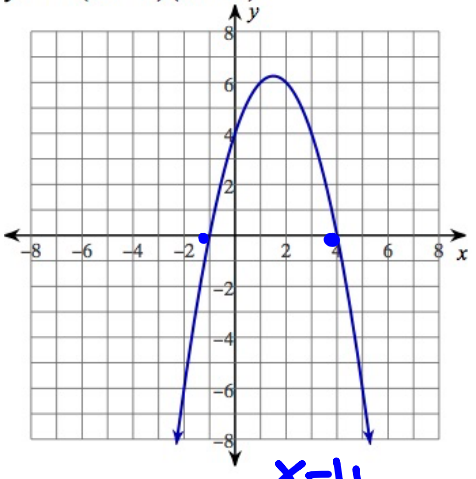
you try :)

$y = -\frac{1}{5}(x-4)(x+2)$



x=-2
x=4

$y = -(x-4)(x+1)$



x=4
x=-1