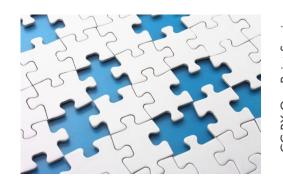
SECONDARY MATH II // MODULE 2 STRUCTURES OF EXPRESSIONS - 2.10

2.10 I've Got a Fill-in

A Practice Understanding Task



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For each problem below, you are given a piece of information that tells you a lot. Use what you know about that information to fill in the rest.

1. You get this:	Fill in this:
	Factored form of the equation:
$y = x^2 - x - 12$	y = (x-4)(x+3)
	χ= .5
	Y = (.5-4)(.5+3) (-3.5)(3.5) = -12.25
	(-3.5)(3.5) = -12.25
	Graph of the equation:

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2. You get this:

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

$$\gamma = (x^2 - 6x + 9) + 3 - 9$$

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

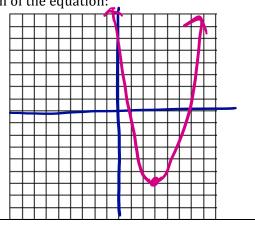
Vertex (3,-6)

Fill in this:

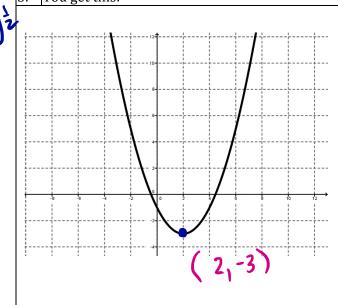
Vertex form of the equation:

$$y = (x - 3)^2 - 6$$

Graph of the equation:



3. You get this:



Fill in this:

Vertex form of the equation:

$$y = \frac{1}{2}(x - a)^2 - 3$$

Standard form of the equation:

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

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

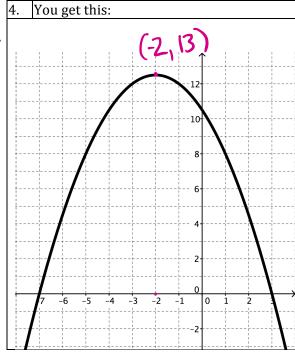
$$\frac{1}{2}x^2 - 2x + 2 - 3$$

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Fill in this:

Factored form of the equation:

$$y = -\frac{1}{2}(x+7)(x-3)$$

$$y = -\frac{1}{2}(x^2 + 4x - 21)$$

Standard form of the equation:

$$y = -\frac{1}{2}x^2 - 2x + \frac{21}{2}$$

5. You get this:

$$y = -x^2 - 6x + 16$$

$$y = -\left(x^2 + 6x - 16\right)$$

$$y = -(x^2+6x+9)+16+9$$

Fill in this:

Either form of the equation other than standard form

$$y = -(x + 8)(x-2) 0e$$

 $y = -(x+3)^2 + 25$

Vertex of the parabola

$$(-3, 25)$$

x-intercepts and y-intercept

$$(-8,0)$$
 $(2,0)$

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6. You get this:	Fill in this:
$y = 2x^2 + 12x + 13$ $doesn' + factor$	Either form of the equation other than standard form.
$y=d(x^2+6x+9)+13-18$ $d(x+3)^2-5$	Vertex of the parabola $\left(-3,-5\right)$
	x-intercepts and y-intercept (0,13)

7. You get this:	Fill in this:
$y = -2x^2 + 14x + 60$ $y = -\lambda \left(x^2 - 7x - 36 \right)$	Either form of the equation other than standard form. $y = -\lambda(x-16)(x+3)$
y = -2 (x-10)(x+3) x = -14 = -14 = -14	Vertex of the parabola $ \begin{pmatrix} 7/2 & 69 \\ 2 & 2 \end{pmatrix} $ $ \begin{pmatrix} 3.5 & 84.5 \end{pmatrix} $
$X = \frac{-14}{2(-2)} = \frac{-14}{-4} = \frac{7}{2}$ $Y = -2(\frac{7}{2})^2 + 14(\frac{7}{2}) + 60$	x-intercepts and y-intercept
Y= 169 Z	(0,60)