

Name: _____

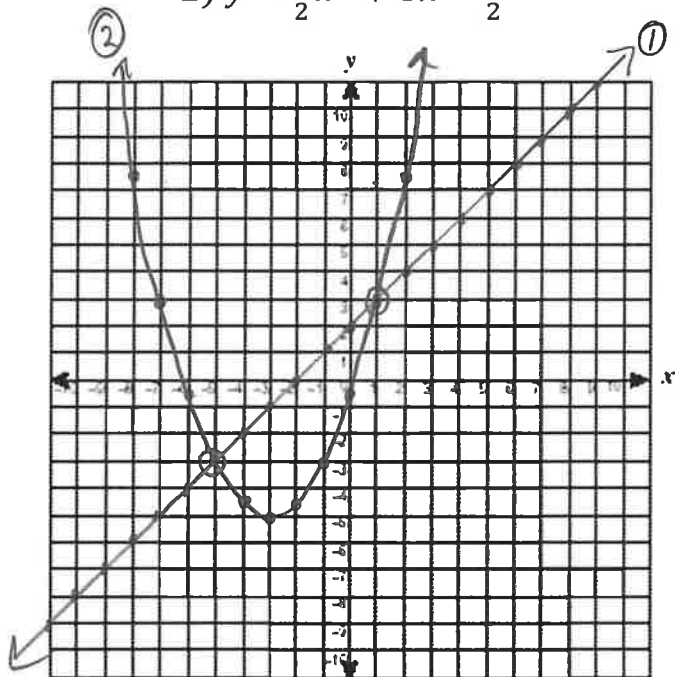
Date: Key

6.2 Worksheet – Solving Systems of Equations by Graphing

Solve each system by graphing.

a) 1) $y - x = 2$

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



① $y = x + 2$ $y\text{-int} = 2$ slope = $\frac{1 \leftarrow \text{up}}{1 \leftarrow \text{right}}$

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

$y = \frac{1}{2}(x^2 + 6x) - \frac{1}{2}$

$b = 6, 3, 9$

$y = \frac{1}{2}(x^2 + 6x + 9 - 9) - \frac{1}{2}$

$y = \frac{1}{2}(x^2 + 6x + 9) - \frac{9}{2} - \frac{1}{2}$

$y = \frac{1}{2}(x+3)^2 - 5$

Vertex $(-3, -5)$

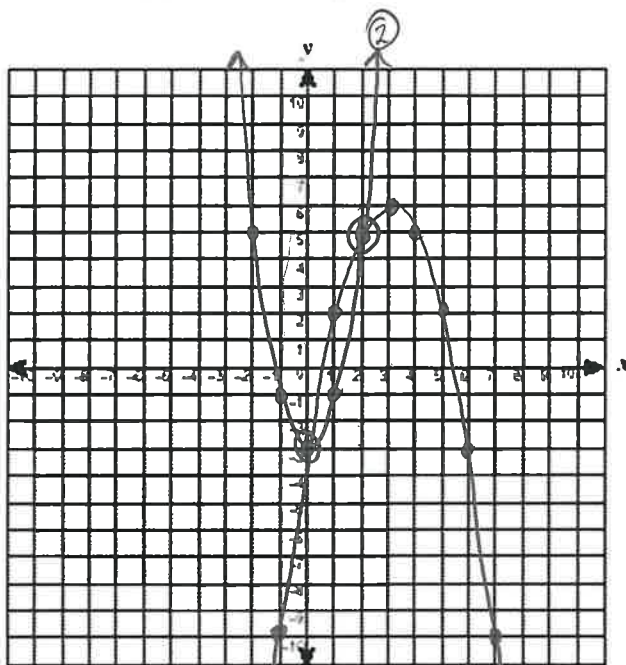
over	1	up	$\frac{1}{2}$
	2		2
	3		4.5
	4		8
	5		12.5

a) Solution(s):

$(-5, -3)$ & $(1, 3)$

b) 1) $y = -x^2 + 6x - 3$

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



① $y = (-x^2 + 6x) - 3$

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

$b = -6, -3, 9$

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

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

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

Vertex $(3, 6)$

over	1	down	1
	2		4
	3		9
	4		16

② $y = 2x^2 - 3$

Vertex $(0, -3)$

$a = 2$

over	1	up	2
	2		8
	3		18

b) Solution(s):

$(0, -3)$ & $(2, 5)$