Day 3: Solving Systems of Equations by Graphing

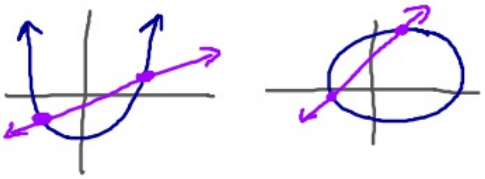
Date_____

1) A System of Equations is a set of equations with the same Variables or unknown.

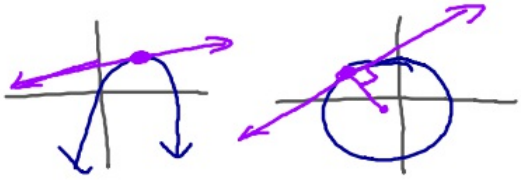
The solution(s) to a system of equations are the points of intersect and are to be written as ordered Coordinate pairs.

A system of equations can have:

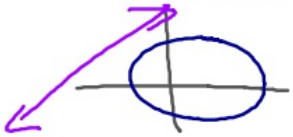
Two Real Solutions:



One Real Solution:



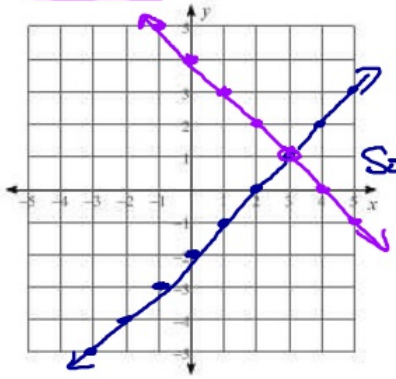
No Real Solutions:



2) To Solve a System of Equations by Graphing:
   a. Graph each equation
   b. Find the points of intersection (where they cross)
   c. Write your solution as an ordered pair.

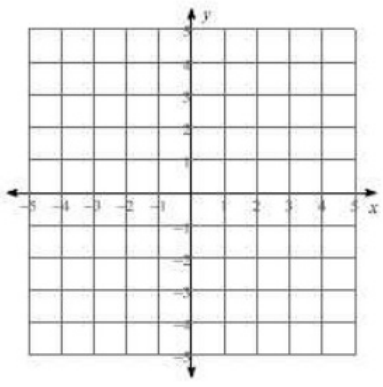
Solve each system by graphing.

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



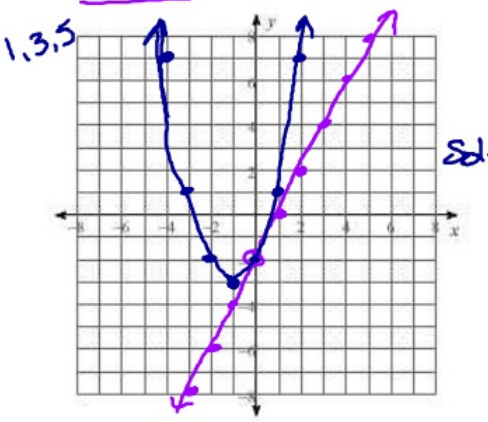
Sol: (3, 1)

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



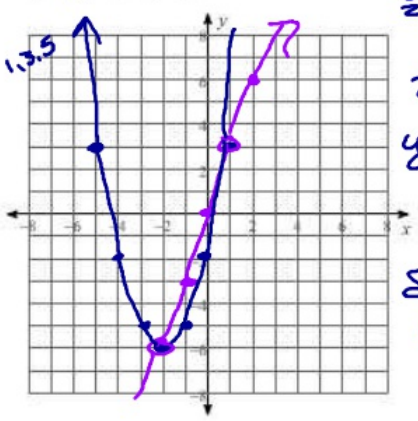
5) $y = (x+1)^2 - 3$
$y = 2x - 2$

$V(-1,-3)$



Sol: $(0,-2)$

6) $y = 3x + 0$
$y = x^2 + 4x - 2$



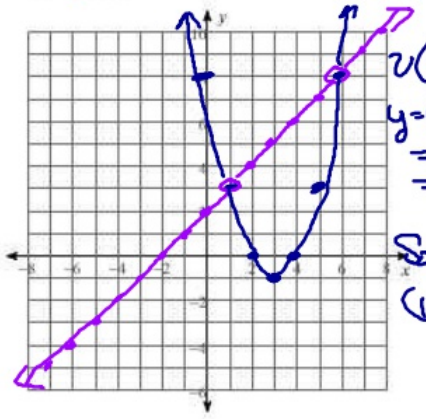
$\frac{-b}{2a} = \frac{-4}{2(1)} = -2$

$V(-2,-6)$

$y = (-2)^2 + 4(-2) - 2$
$= 4 - 8 - 2$
$= -6$

Sol:
$(-2,-6)$ & $(1,3)$

7) $y = (x-2)(x-4)$ cos: 3
$y = x + 2$



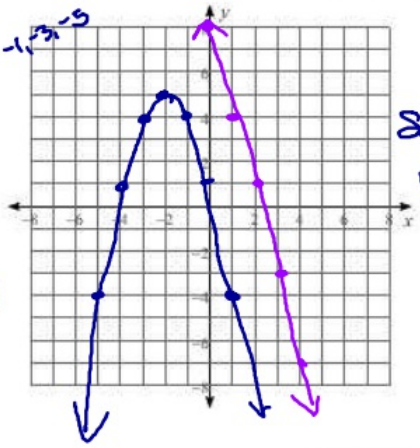
$V(3,-1)$

$y = (3-2)(3-4)$
$= (1)(-1)$
$= -1$

Sol:
$(1,3)$ & $(6,8)$

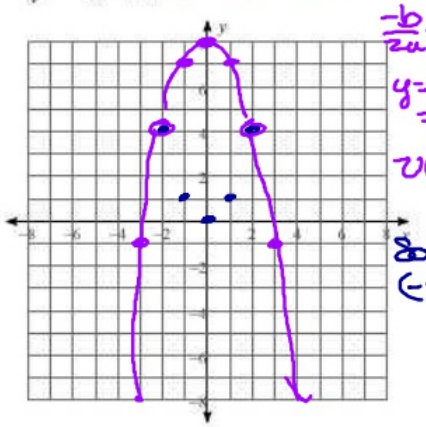
8) $y = -4x + 8$
$y = -(x+2)^2 + 5$

$V = (-2,5)$



Sol:
none.

9) $y = x^2 + 0x + 0$
$y = -x^2 + 8$ $= -x^2 + 0x + 8$



$\frac{-b}{2a} = \frac{0}{2(1)} = 0$

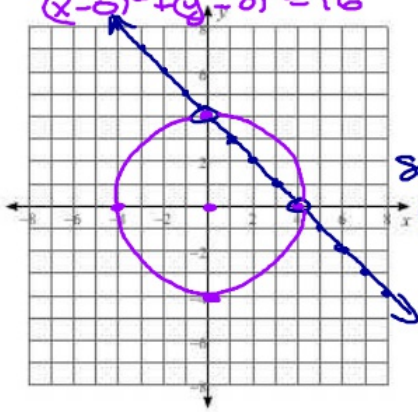
$y = -0^2 + 8$
$= 8$

$V(0,8)$

Sol:
$(-2,4)$ & $(2,4)$

10) $y = 4 - x$ $= -1x + 4$
$x^2 + y^2 = 16$

$(x-0)^2 + (y-0)^2 = 16$



Sol:
$(0,4)$ & $(4,0$