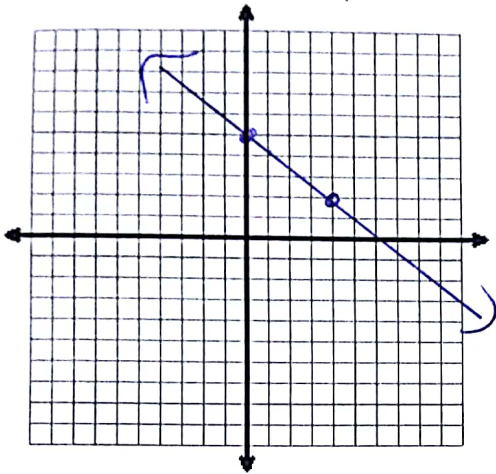


(No calculator)

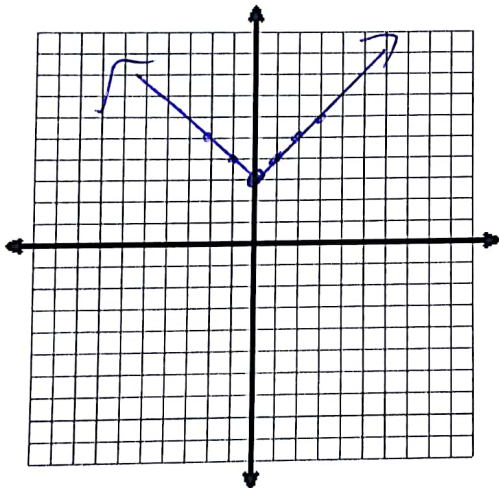
Algebra 2 Trig - First Semester Final Review - Graphs

NAME key

1.) Graph.  $y = -\frac{3}{4}x + 5$

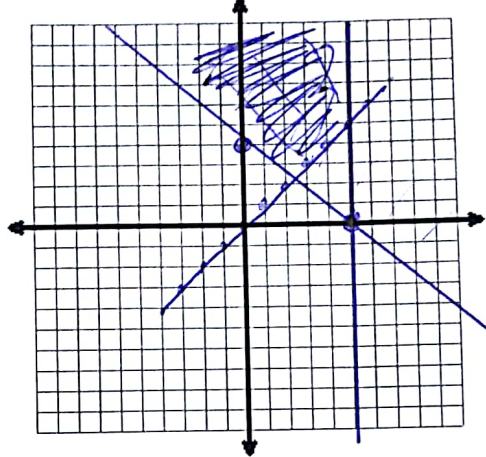


2.) Graph the function defined by  $y = |x - 3|$

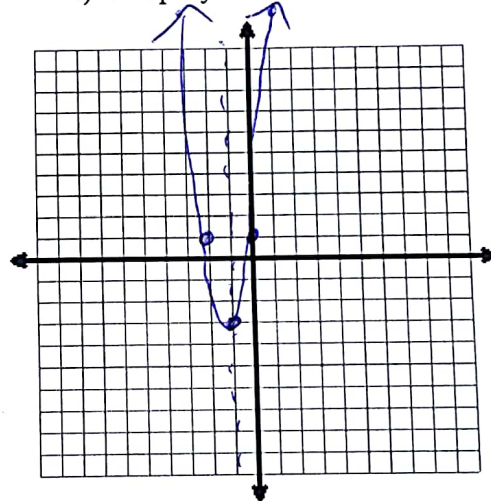


3.) Graph the system of inequalities

$4x + 5y \geq 20$   
 $x \leq y$   
 $x \leq 5$  (1, 2)



4.) Graph  $y = 4x^2 + 8x + 1$



$x = \frac{-b}{2a} = \frac{-8}{4(2)} = -1$

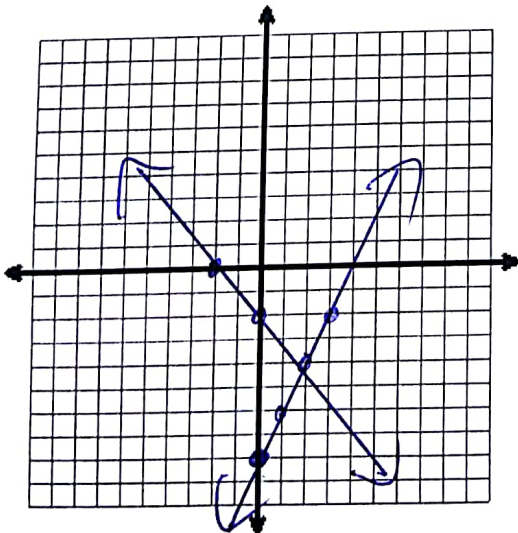
$(-1, -3)$

$y = 4(-1)^2 + 8(-1) + 1 = -3$

x	y
-3	13
-2	1
-1	-3
0	1
1	13

3.) Solve the system the graphing:

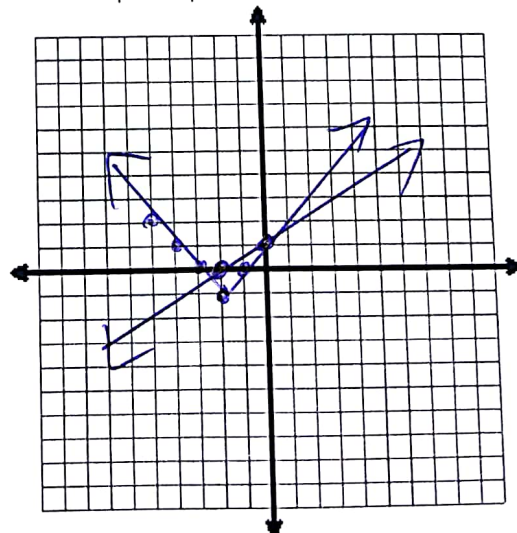
$x + y = -2$   
 $y = 2x - 8$



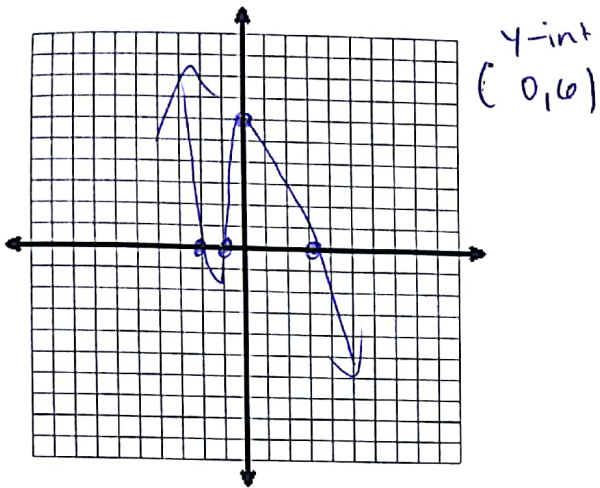
5.) Graph and solve:

$x - 2y = -2$

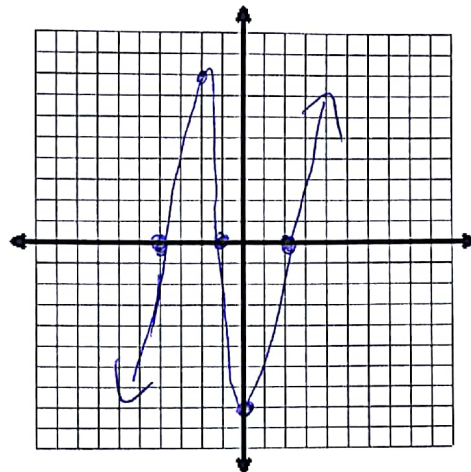
$y = |x + 2| - 1$



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



6.) Graph.  $y = x^3 + 3x^2 - 6x - 8$



$$\frac{8}{1} : \frac{1, 2, 4, 8}{1}$$

$$\pm 1, 2, 4, 8$$

$$2) \begin{array}{r} 1 \quad 3 \quad -6 \quad -8 \\ \underline{2 \quad 10 \quad 8} \\ 1 \quad 5 \quad 4 \quad 0 \end{array}$$

$$\begin{array}{r} 2 \quad 10 \quad 8 \\ \underline{1 \quad 5 \quad 4 \quad 0} \end{array}$$

$$x^2 + 5x + 4$$

$$x = \frac{-5 \pm \sqrt{25 - 4(1)(4)}}{2(1)}$$

$$x = \frac{-5 \pm \sqrt{9}}{2}$$

$$x = \frac{-5 \pm 3}{2}$$

$$x = -1, -4$$

$$7.) C(x) = \begin{cases} 7 & \text{for } 0 < x \leq 1 \\ 11 & \text{for } 1 < x \leq 2 \text{ and so on.} \\ 15 & \text{for } 2 < x \leq 3 \end{cases}$$

Graph C for  $0 < x \leq 3$ .

