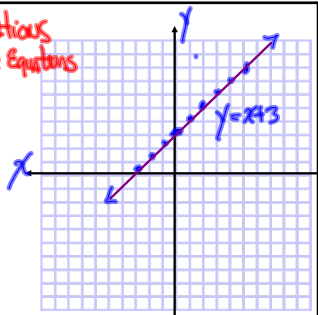
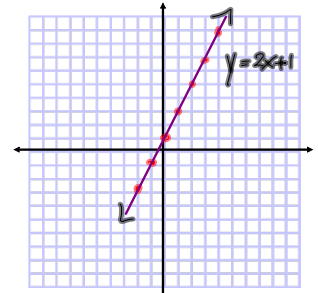


Thursday November 10, 2011
 HW #19
 Aka: How do we solve quadratic-linear systems of equations?
 Test #4 is 1/16/2011 based on HW #20
 HW #8-#20 ARE due 1/30/2011 at 11:45pm (END OF MP2)
 Do Now GRAPH PAPER TO GRAPH
 1) $y = x + 3$ 2) $y = 2x + 1$ 3) $x + y = 4$
 4) $y = -3$ 5) $y = -\frac{2}{3}x + 2$

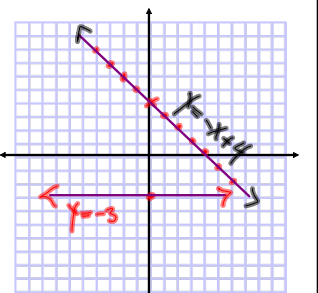
Nov 10-9:32 AM

1) $y = x + 3$ - LINEAR EQUATIONS
 - FIRST DEGREE EQUATIONS
 $y = mx + b$
 m (slope) = 1 or $\frac{1}{1}$ to go
 b (y-intercept) = 3 begin


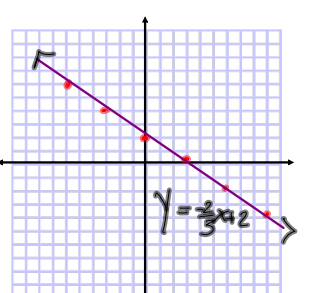
Nov 10-9:43 AM

2) $y = 2x + 1$
 $m = \frac{2}{1}$
 $b = 1$



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3) $x + y = 4$
 $y = -x + 4$
 $y = mx + b$
 $m = -\frac{1}{1}$
 $b = 4$
 4) $y = -3$
 $m = 0$
 $b = -3$


Nov 10-9:50 AM

4) $y = -\frac{2}{3}x + 2$
 $m = -\frac{2}{3}$ Go?
 $b = 2$


Nov 10-9:55 AM

I- Quadratic-linear Systems (more than one)
 1) It has a quadratic function (Parabola) and a linear function (straight line)
 2) they have 3 possibilities of intersection


Nov 10-9:58 AM

3) Graph the System and the Solution(s)

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

$y = x + 1$
 $m = 1$
 $b = 1$

Quadratic function

1) find $a = b = c = -3$

2) $x = \frac{-b}{2a} = \frac{-6}{2(-1)} = 3$

3) TABLE

x	$-x^2 + 6x - 3$	y	(x,y)
1	-2	4	(1,2)
2	5	3	(2,5)
3	6	4	(3,6)
4	5	5	(4,5)
5	-2	6	(5,6)

4) GRAPH

two solutions
 $(1, 2)$
 $(4, 5)$

Nov 10-10:04 AM

II - A circle

Center = (0,0)

Center = (h,k)

1 RADIUS
2 RADIUS

How do you find the length of the radius?

$D^2 = (x_2 - x_1)^2 + (y_2 - y_1)^2$
 $r^2 = (x - h)^2 + (y - k)^2 \Rightarrow$ Equation of a Circle

ex: $(x - 2)^2 + (y - 1)^2 = 25$

Center: (2, -1)
 Radius: 5

Nov 10-10:19 AM