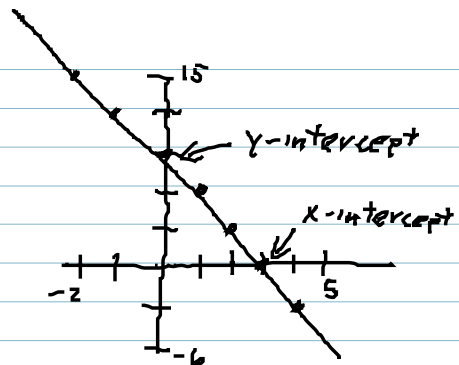


$$y + 3x - 5 = 4$$

$$y + 3x = 9$$

$$y = -3x + 9$$

x	y
-2	15
-1	12
0	9
1	6
2	3
3	0
4	-3



Complete graph

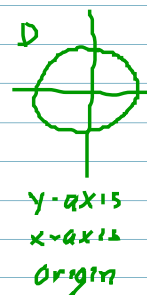
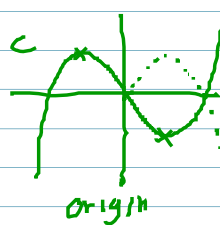
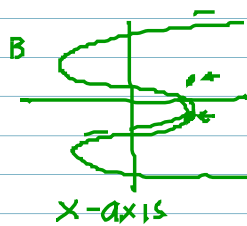
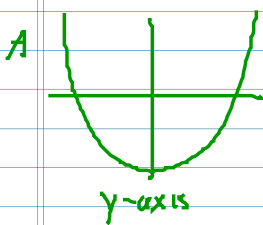
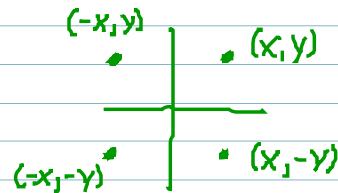
x-intercept - set  $y=0$   
 y-intercept - set  $x=0$

Symmetry

x-axis -  $(x, y) \leftrightarrow (x, -y)$

y-axis -  $(x, y) \leftrightarrow (-x, y)$

origin -  $(x, y) \leftrightarrow (-x, -y)$

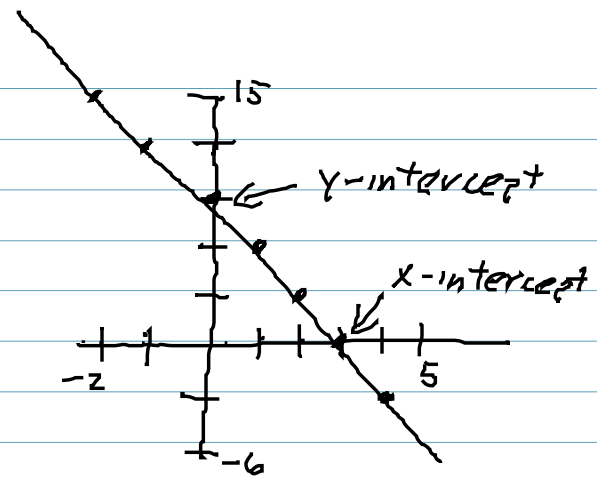


$$y + 3x - 5 = 4$$

$$y + 3x = 9$$

$$y = -3x + 9$$

x	y
-2	15
-1	12
0	9
1	6
2	3
3	0
4	-3



complete graph

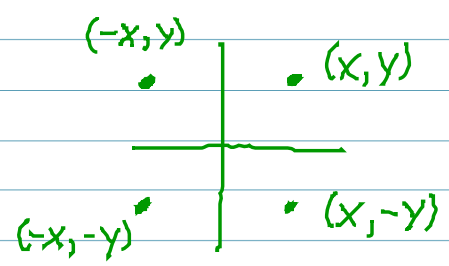
x-intercept - set  $y=0$   
 y-intercept - set  $x=0$

Symmetry

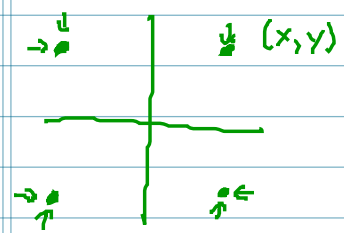
x-axis -  $(x, y) \leftrightarrow (x, -y)$

y-axis -  $(x, y) \leftrightarrow (-x, y)$

origin -  $(x, y) \leftrightarrow (-x, -y)$

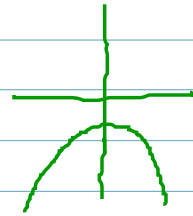


- A y-axis
- B x-axis
- C origin
- D y-axis  
x-axis  
origin



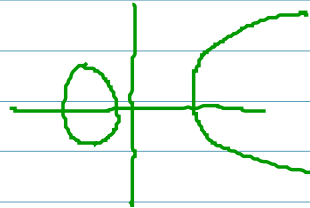
$$\underline{3x^2 - 5y = 7}$$

✓ y-axis	$3(-x)^2 - 5y = 7 \rightarrow 3x^2 - 5y = 7$
x x-axis	$3x^2 - 5(-y) = 7 \rightarrow 3x^2 + 5y = 7$
x origin	$3(-x)^2 - 5(-y) = 7 \rightarrow 3x^2 + 5y = 7$



$$\underline{4x^3 - 7x = 6y^4 + 1}$$

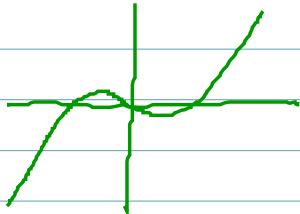
x y-axis	$4(-x)^3 - 7(-x) = 6y^4 + 1 \rightarrow -4x^3 + 7x = 6y^4 + 1$
✓ x-axis	$4x^3 - 7x = 6(-y)^4 + 1 \rightarrow 4x^3 - 7x = 6y^4 + 1$
x origin	$4(-x)^3 - 7(-x) = 6(-y)^4 + 1 \rightarrow -4x^3 + 7x = 6y^4 + 1$



$$\underline{5x^5 - 3x^3 = 7y^3 + 4y}$$

x y-axis	$5(-x)^5 - 3(-x)^3 = 7y^3 + 4y \rightarrow -5x^5 + 3x^3 = 7y^3 + 4y$
x x-axis	$5x^5 - 3x^3 = 7(-y)^3 + 4(-y) \rightarrow 5x^5 - 3x^3 = -7y^3 - 4y$
✓ origin	$5(-x)^5 - 3(-x)^3 = 7(-y)^3 + 4(-y) \rightarrow (-5x^5 + 3x^3) = (-7y^3 - 4y)$

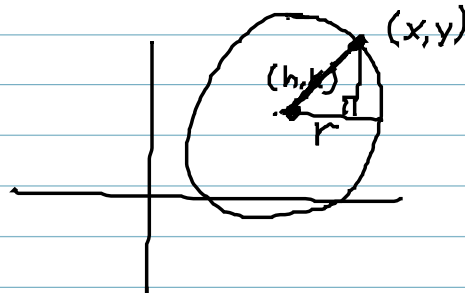
$$5x^5 - 3x^3 = 7y^3 + 4y$$



Circle - collection of points in a plane that are equidistant from a common center point

radius -  $r$

center -  $(h, k)$



standard -  $d = \sqrt{(x-h)^2 + (y-k)^2}$

$$r^2 = (x-h)^2 + (y-k)^2$$

center =  $(0, 0)$

$$x^2 + y^2 = r^2$$

unit circle

$$x^2 + y^2 = 1$$