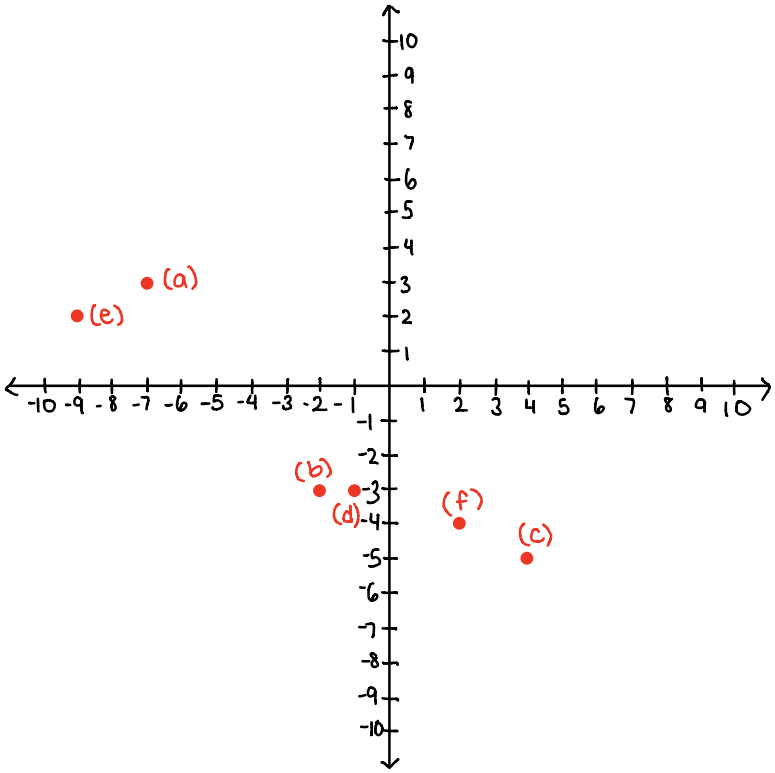
Math 134 Spring 2018
Krystin Manguba-Glover
Classwork 5 Name: _____

Work on as many problems as you can together with your group members. Towards the end of lecture your group will be asked to present a problem correctly to receive classwork points.

1. Plot the following ordered pairs on the rectangular coordinate plane. Label your points.

   (a) $(-7, 3)$
   (b) $(-2, -3)$
   (c) $(4, -5)$
   (d) $(-1, -3)$
   (e) $(-9, 2)$
   (f) $(2, -4)$

Solution



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2. For each of the following, complete the table of values and graph the equation:

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

(a) $y = x - 5$

(b) $y = 5|x|$

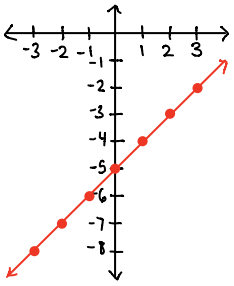
(c) $y = 5 - x^2$

(d) $y = 2$

Solution

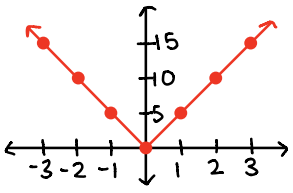
(a)

x	y
-3	-8
-2	-7
-1	-6
0	-5
1	-4
2	-3
3	-2



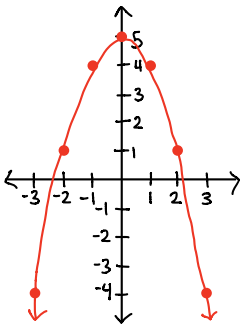
(b)

x	y
-3	15
-2	10
-1	5
0	0
1	5
2	10
3	15



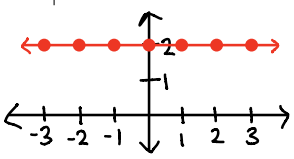
(c)

x	y
-3	-4
-2	1
-1	4
0	5
1	4
2	1
3	-4



(d)

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



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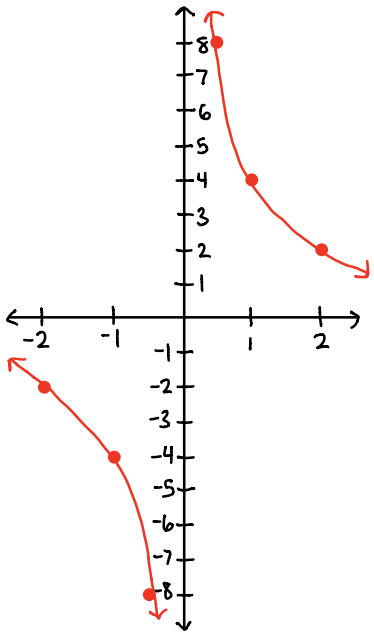
3. Find the y-values in the table and then graph the equation $y = \dfrac{4}{x}$

x	y
-2	
-1	
$-1/2$	
$1/2$	
1	
2	

Solution

x	y
-2	-2
-1	-4
$-1/2$	-8
$1/2$	8
1	4
2	2



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4. Answer the following questions using the table below:

x	y
-3	-1
-2	-2
-1	-3
0	-4
1	-5
2	-6
3	-7

(a) Determine which equation corresponds to the table.

i. y = 1-4x

ii. y = x+1

iii. y = -4-x

iv. y = x-4

(b) Does the graph of y pass through the origin?

(c) At which point does the graph pass the y-axis?

Solution

(a) $\boxed{y = -4 - x}$

(b) $\boxed{\text{no}}$

(c) $\boxed{(0, -4)}$

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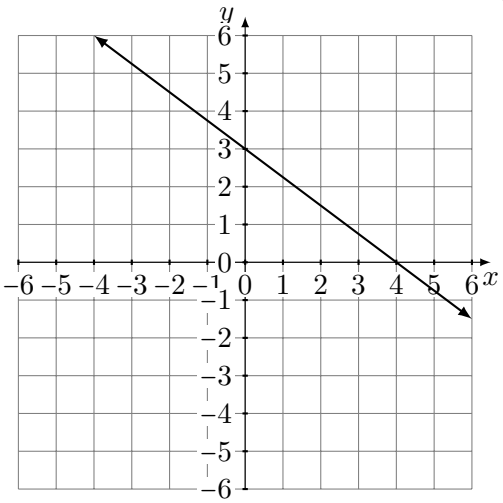
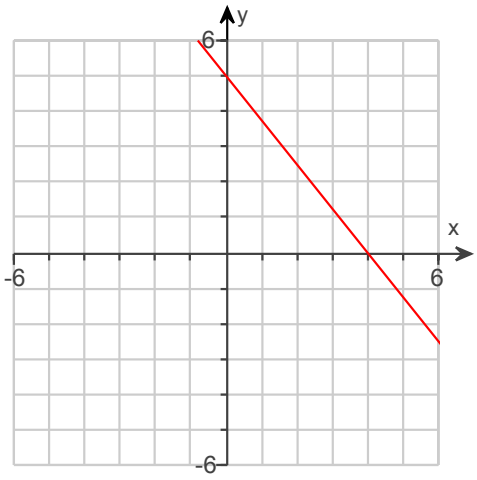
5. Determine the x and y intercepts for the following:

(a)



(b)



(c) The equation corresponding to the table

x	y_1	y_2
-3	4	-1
-2	3	0
-1	2	-1
0	1	-2
1	0	-3
2	-1	-4
3	-2	-5

Solution

(a) $\boxed{x\text{-intercept: } 4,\ y\text{-intercept: } 3}$

(b) $\boxed{x\text{-intercept: } 4,\ y\text{-intercept: } 5}$

(c) $\underline{y_1}$

$\boxed{x\text{-intercept: } 1,\ y\text{-intercept: } 1}$

$\underline{y_2}$

$\boxed{x\text{-intercept: } -2,\ y\text{-intercept: } -2}$

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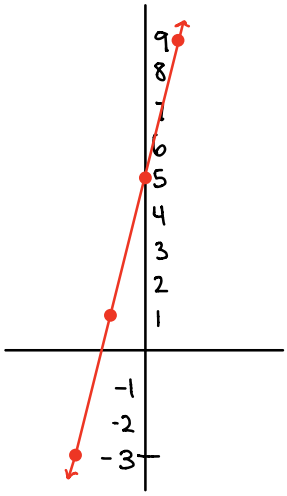
6. Write the following english sentences as equations in two variables. Then graph the equations:

   (a) The y value is five more than four times the x-value.

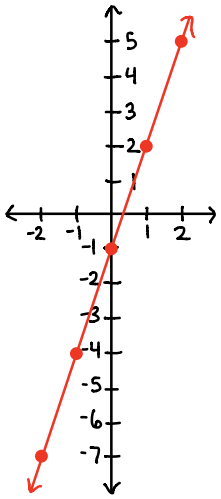
   (b) The y-value is one less than three times the x-value.

Solution

(a) $y = 4x + 5$



(b) $y = 3x - 1$



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