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) $(2, -4)$

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) $y = 2$

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 | |

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

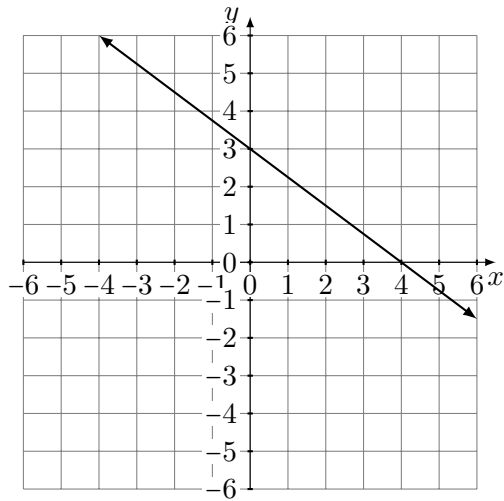      iii. y = -4-x

      iv. y = x-4
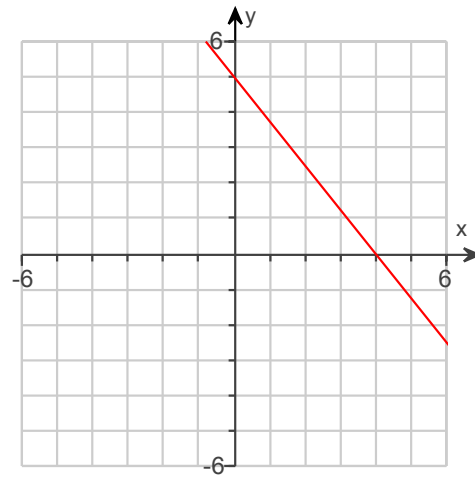
   (b) Does the graph of $y$ pass through the origin?

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

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 |

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.