3.2 Graphing Linear Equations **Math 55 Professor Busken**

Objectives

- Determine if an ordered pair is a solution of a linear equation in x and y.
- Graphing Linear Equations
- Application

Exercises

1. Determine if each ordered pair is a solution of $3x - 2y = 4$

   a) $(-8, 2)$ b) $(-3, 5)$ c) $(0, -2)$ d) $(1, -\frac{1}{2})$

2. Complete the ordered pair-solutions. Then plot each solution and graph the equation by connecting the points in a straight line.

   a) $y = 4 - x$ $(10, \quad), (-3, \quad), (0, \quad)$

   b) $y = -2x + 3$ $(2, \quad), (0, \quad), (-2, \quad)$

   c) $3x - 2y = 0$ $(4, \quad), (-8, \quad), (0, \quad)$

3. Graph each equation.

   a) $y = 2x + 1$ b) $2x + 3y = 6$ c) $y = -\frac{1}{3}x + 4$ d) $\frac{3}{2}x + y = 5$

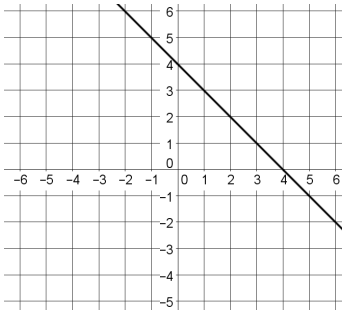
4. The population of an endangered species of fish living in a controlled habitat is given by the equaiton $P = 7t+46$, where P is the population and t is the time in months since the population was moved to the habitat.

   (a) Graph the equation using $t = 0, 6, 12, 18$.

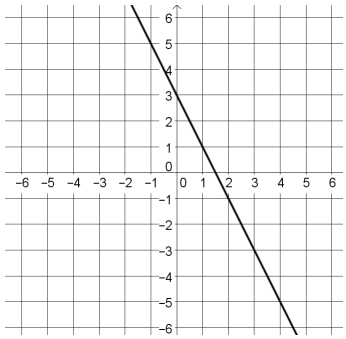
   (b) What is the population 9 months after the fish were moved to the controlled habitat?

Answers: 1a) no, b) no, c) yes , d) yes 2a) -6, 7, 4, 2b) -1, 3, 7, 2c) 6, -12, 0,

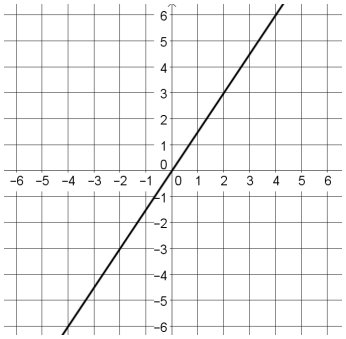
2)



(a)

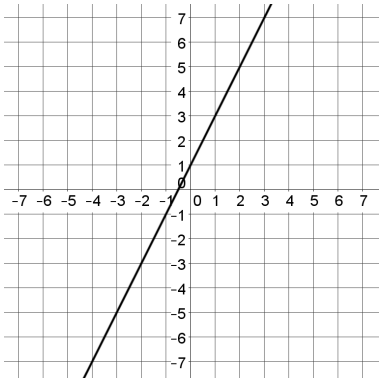


(b)

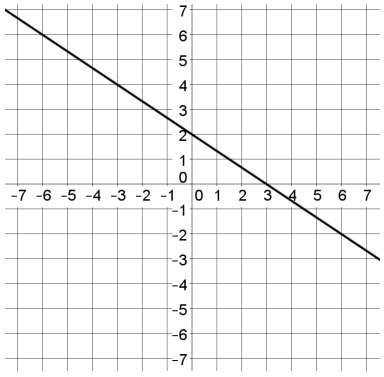


(c)

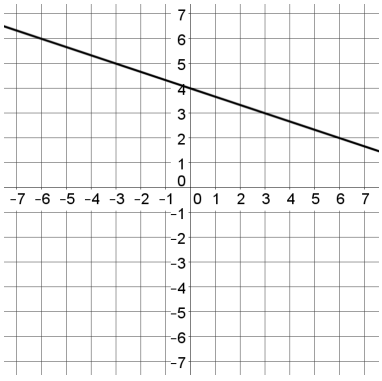
3)



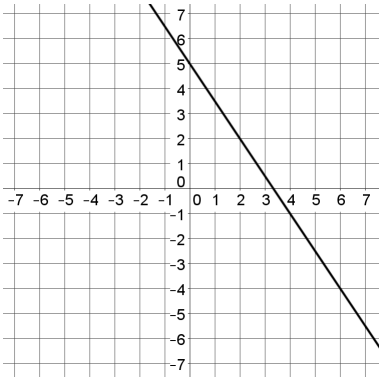
(a)



(b)



(c)



(d)

4b) 109 fish