MAT99 Lab Sheet 5: Graph of Linear Equation and System of Linear Equations

October 18, 2016

Name:

1. Find the equation of a line

   (a) through the point $(1, -1)$, having the slope of 4

   (b) through the point $(6, -2)$, having the slope of $-\frac{2}{3}$

   (c) through the points $(2, 2)$ and $(-2, -6)$

   (d) through the points $(-2, 5)$ and $(0, 1)$

   (e) through the points $(1, -3)$ and $(-7, 2)$

   (f) through the point $(4, -1)$ and is parallel to the line $y = -2x + 4$

2. How many solution does the below system of linear equations have? (Do not solve the system) Is the system consistent, inconsistent, or dependent?

   (a)
   $$\begin{cases} y = 3x + 4 \\ y = -2x - 1 \end{cases}$$

   (b)
   $$\begin{cases} y = x - 5 \\ y = x + 3 \end{cases}$$

   (c)
   $$\begin{cases} y = -2x + 4 \\ y = x + 3 \end{cases}$$

   (d)
   $$\begin{cases} 2x + 2y = 4 \\ y = -x + 2 \end{cases}$$

3. Solve the system of linear equation.

   (a)
   $$\begin{cases} y = -2x + 27 \\ 3x - 7y = -2 \end{cases}$$

(b)

$$\begin{cases} -2x - y = 9 \\ x + 7y = 15 \end{cases}$$

(c)

$$\begin{cases} 7a + 2b = -1 \\ 3a - 4b = 19 \end{cases}$$

(d)

$$\begin{cases} 3x - y = 2 \\ -9x + 3y = 8 \end{cases}$$