Math 1201 Worksheet: Systems of Linear Equations

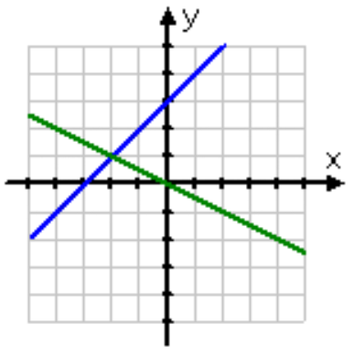
1. Given the linear system $\begin{aligned} 4x + y &= 14 \\ -2x + 4y &= -16 \end{aligned}$ verify (4, – 2) is the solution.

2. Which linear system models the situation: "In a board game, Judy scored 3 points more than twice the number of points as Ann scored. There was a total of 39 points scored."

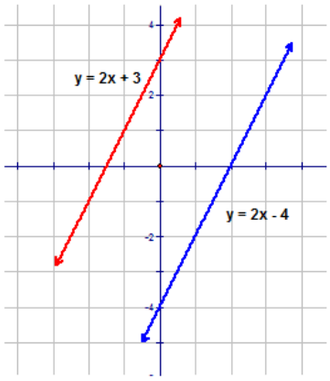
a) $\begin{aligned} j - 3 &= 2a \\ j + 2a &= 39 \end{aligned}$ b) $\begin{aligned} j &= 3 + 2a \\ j + a &= 39 \end{aligned}$ c) $\begin{aligned} j + 3 &= 2a \\ j + a &= 39 \end{aligned}$ d) $\begin{aligned} a &= 3 + 2j \\ j + a &= 39 \end{aligned}$

3. What is the solution for the system of equations represented in each graph?

a)

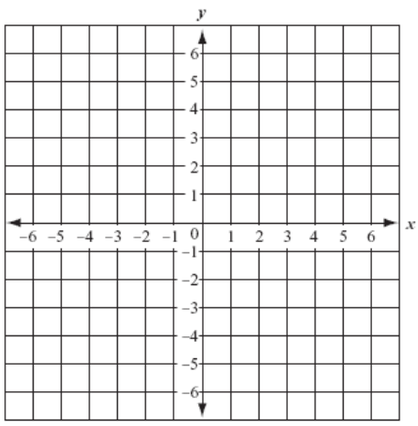


b)

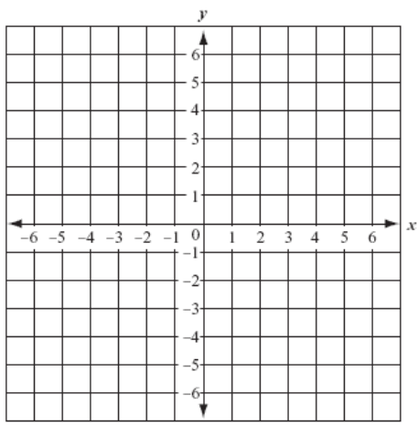


4. Solve each linear system by graphing.

a) $\begin{aligned} y &= -2x + 2 \\ y + 6 &= 2x \end{aligned}$



b) $\begin{aligned} -5x - y - 2 &= 0 \\ 2y + 4 &= 4x \end{aligned}$



5(i). Determine the number of solutions for the linear system $\begin{aligned} 2x - 5y &= 1 \\ -6x + 15y &= -3 \end{aligned}$

a) no solution b) one solution c) two solutions d) infinite solutions

5(ii) Justify your answer.