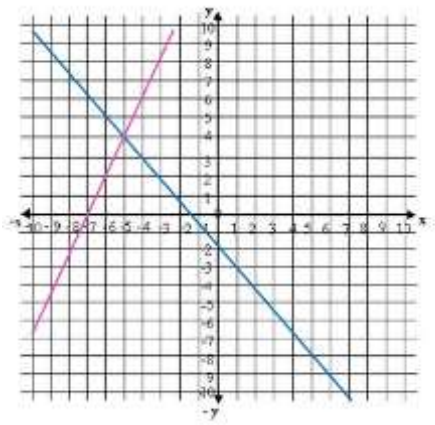
Name: _____ Period: _____ Date: _____

SOLVING LINEAR SYSTEMS BY GRAPHING Assignment

Identify from the graph the solution of the system and determine if it is an independent, inconsistent or dependent system

1.



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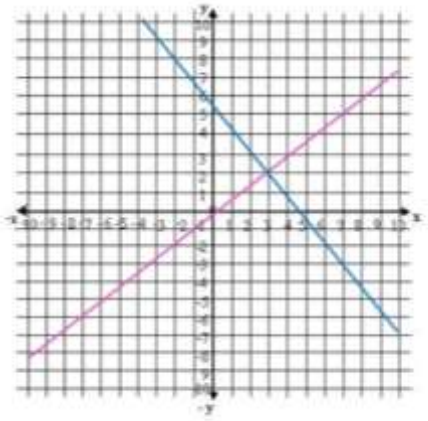
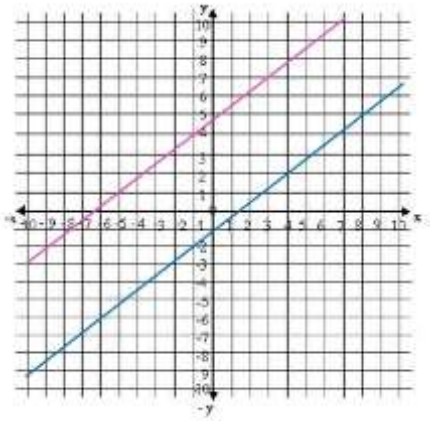


3.



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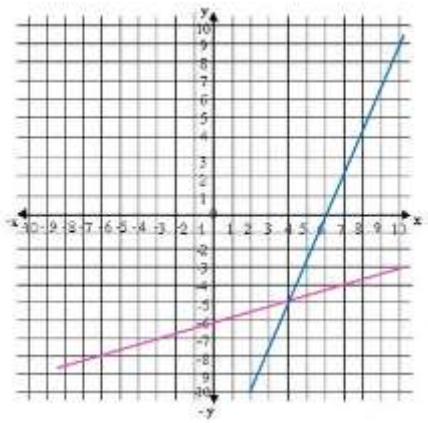
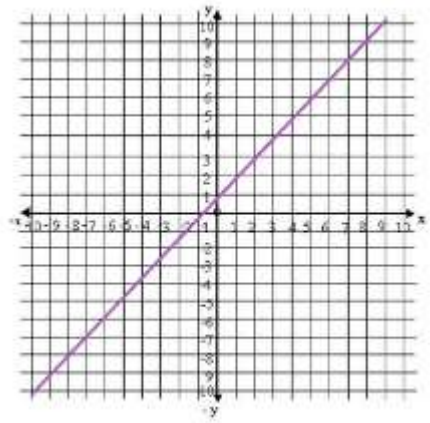
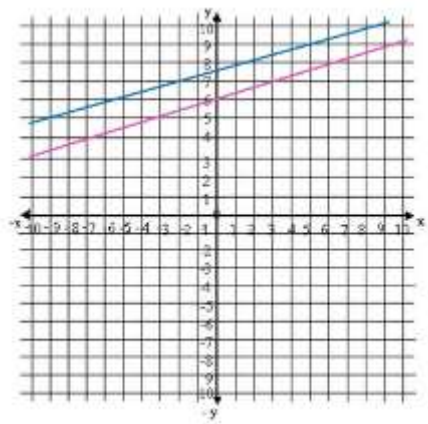


5.



6.



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SOLVING LINEAR SYSTEMS BY GRAPHING Assignment

Find the solution of the following systems by graphing

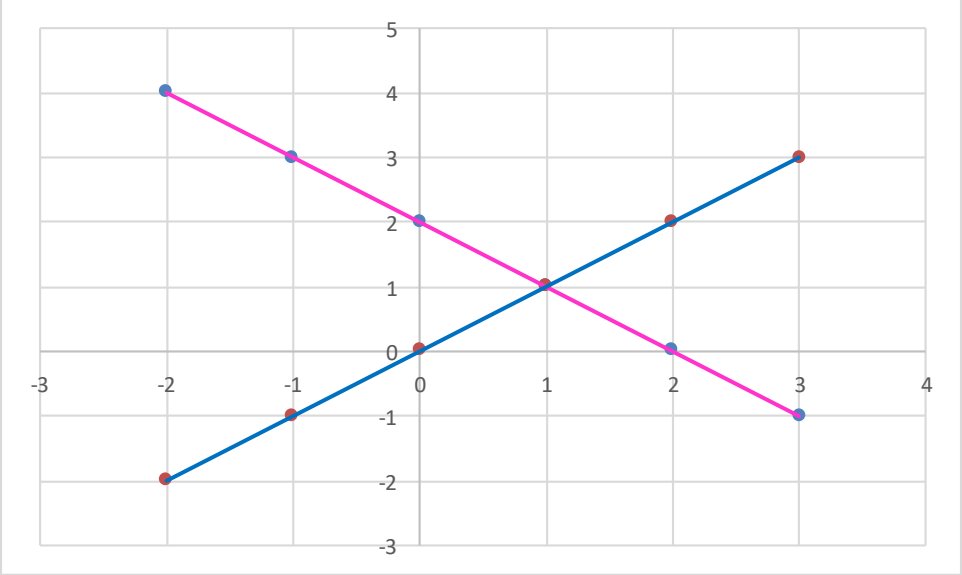
7. $\begin{cases} 2x + y = 6 \\ x + y = 5 \end{cases}$

8. $\begin{cases} 3x + 5y = 15 \\ 2x + 2y = 6 \end{cases}$

9. $\begin{cases} x + y = 3 \\ 2x + 2y = 6 \end{cases}$

10. $\begin{cases} X + 4y = 1 \\ 2x + y = -5 \end{cases}$

11. From the given graph, identify the equations of the linear functions that compose the system



Name: _____ Period: _____ Date: _____

SOLVING LINEAR SYSTEMS BY GRAPHING Assignment

ANSWER

Identify from the graph the solution of the system and determine if it is an independent, inconsistent or dependent system

Remember the solution will be the point of intersection between both linear functions.

1. Solution (-5,4) , Independent System
2. Solution (3,2) , Independent System
3. No solution, Inconsistent System
4. Solution (4,-5) , Independent System
5. Infinite solutions, Dependent System
6. No solution, Inconsistent System

Find the solution of the following systems by graphing

One easy way to graph each linear function is to find its intercepts with the axes.

7. $2x + y = 6$

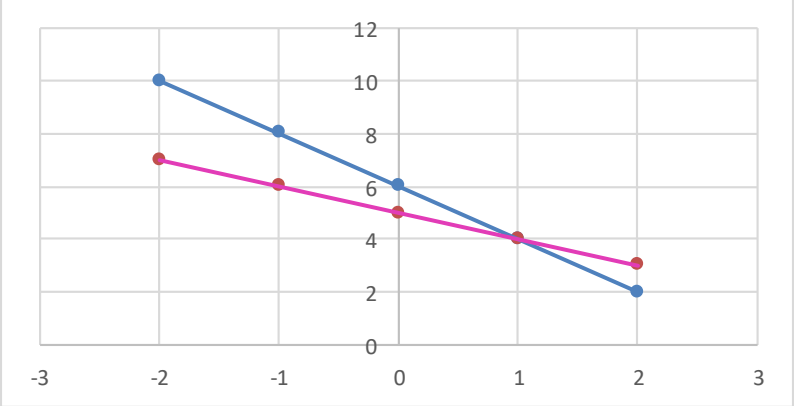
$$x = 0 \rightarrow y = 6 \rightarrow (0,6)$$

$$y = 0 \rightarrow x = 3 \rightarrow (3,0)$$

$x + y = 5$

$$x = 0 \rightarrow y = 5 \rightarrow (0,5)$$

$$y = 0 \quad \rightarrow \quad x = 5 \rightarrow (5,0)$$



System Solution (1, 4)

Name: _____ Period: _____ Date: _____

SOLVING LINEAR SYSTEMS BY GRAPHING Assignment

8. $3x + 5y = 15$

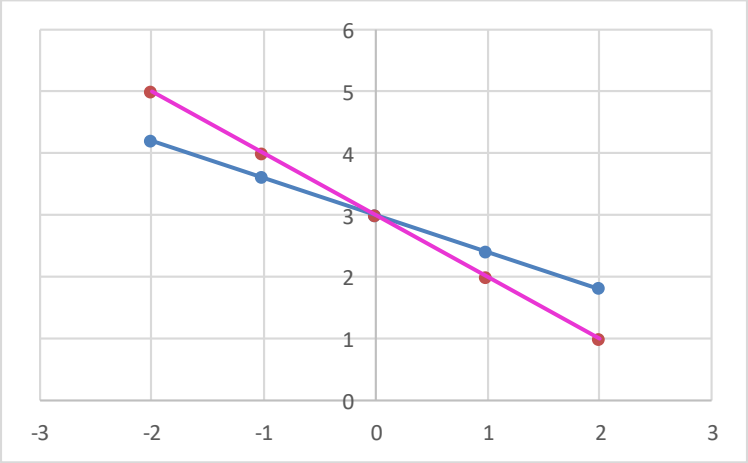
$$x = 0 \rightarrow y = 3 \rightarrow (0,3)$$

$$y = 0 \rightarrow x = 5 \rightarrow (5,0)$$

$2x + 2y = 6$

$$x = 0 \rightarrow y = 3 \rightarrow (0,3)$$

$$y = 0 \rightarrow x = 3 \rightarrow (3,0)$$



System Solution (0, 3)

9. $x + y = 3$

$$x = 0 \rightarrow y = 3 \rightarrow (0,3)$$

$$y = 0 \rightarrow x = 3 \rightarrow (3,0)$$

$2x + 2y = 6$

$$x = 0 \rightarrow y = 3 \rightarrow (0,3)$$

$$y = 0 \rightarrow x = 3 \rightarrow (3,0)$$

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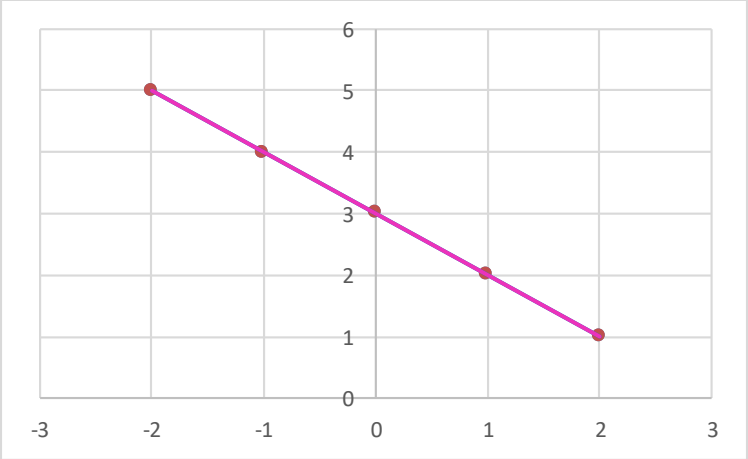
SOLVING LINEAR SYSTEMS BY GRAPHING Assignment



System Solution: Infinite solutions

10. $\boldsymbol{x + 4y = 1}$

$$x = 0 \rightarrow y = 1/4 \rightarrow (0, \frac{1}{4})$$

$$y = 0 \quad \rightarrow \quad x = 1 \rightarrow (1,0)$$

$\boldsymbol{2x + y = -5}$

$$x = 0 \rightarrow y = -5 \rightarrow (0, -5)$$

$$y = 0 \quad \rightarrow \quad x = -5/2 \rightarrow (-\frac{5}{2}, 0)$$

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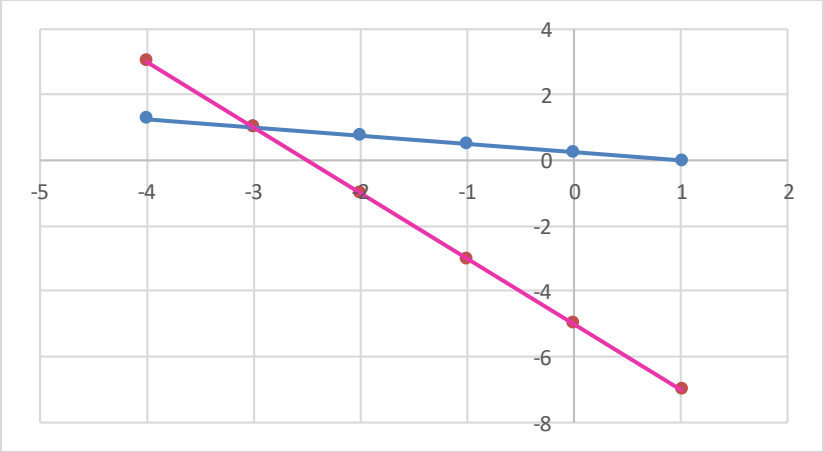
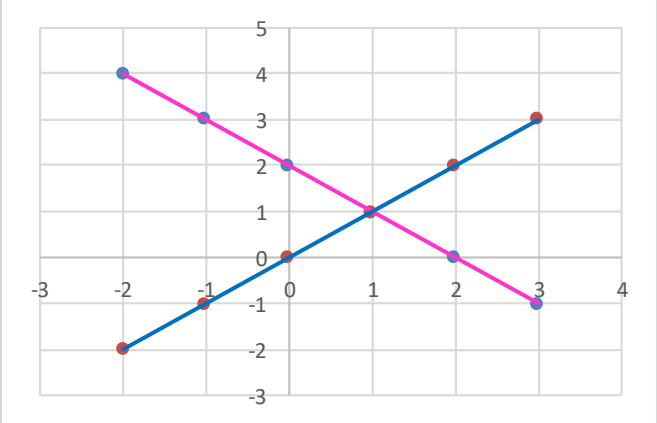
SOLVING LINEAR SYSTEMS BY GRAPHING Assignment



System Solution (-3, 1)

11. From the given graph, identify the equations of the linear functions that compose the system

Select two points for each linear function to calculate its equation, one point would be the intersection point and the other a point that belong to each of the corresponding linear function.



- **For the blue line: (1,1) and (0,0)**

$$y - y1 = \frac{y2 - y1}{x2 - x1}(x - x1)$$

$$y - 0 = \frac{1 - 0}{1 - 0}(x - 0)$$

$$y = x \quad \rightarrow x - y = 0$$

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SOLVING LINEAR SYSTEMS BY GRAPHING Assignment

- **For the pink line: (1,1) and (0,2)**

$$y - y1 = \frac{y2 - y1}{x2 - x1}(x - x1)$$

$$y - 1 = \frac{2 - 1}{0 - 1}(x - 1)$$

$$y - 1 = -x + 1 \quad \rightarrow x + y = 2$$

Finally:

x + y = 2

x – y = 0