

Class Name : *MT* Math 095 MW Fall 18 - Math 095
MW Fall18 B02

Instructor Name : Bottom

Student Name : _____

Instructor Note : _____

1. For each ordered pair, determine whether it is a solution to the system of equations.

$$\begin{cases} 8x - 2y = 6 \\ y = 4x - 3 \end{cases}$$

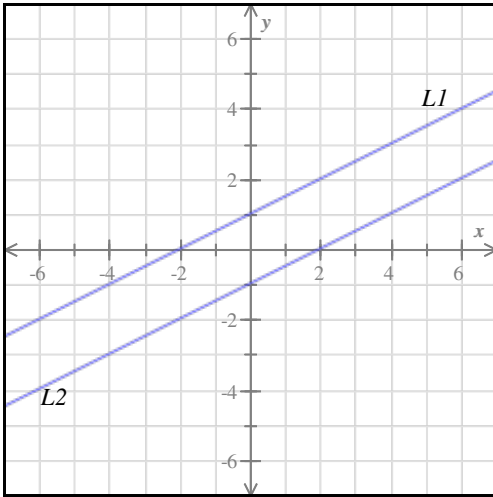
(x, y)	Is it a solution?	
	Yes	No
$(5, 17)$	☐	☐
$(0, 7)$	☐	☐
$(3, -1)$	☐	☐
$(-2, -11)$	☐	☐

2.

For each system of linear equations shown below, classify the system as "consistent dependent," "consistent independent," or "inconsistent." Then, answer the question about its solutions.

$$L1: y = \frac{1}{2}x + 1$$

$$L2: y = \frac{1}{2}x - 1$$



This system of equations is:

- consistent dependent - consistent independent - inconsistent

This means the system has:

- a unique solution:

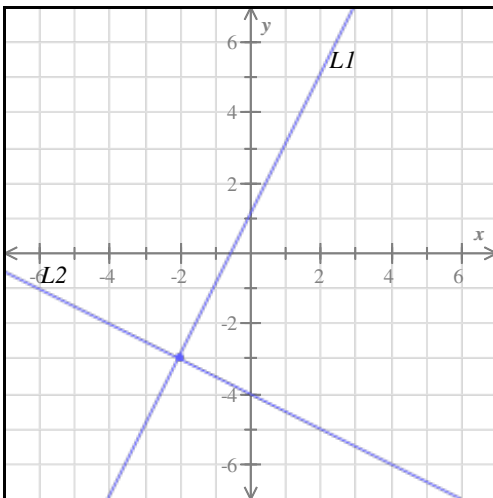
Solution: (,)

- no solution

- infinitely many solutions

$$L1: y = 2x + 1$$

$$L2: y = -\frac{1}{2}x - 4$$



This system of equations is:

- consistent dependent - consistent independent - inconsistent

This means the system has:

- a unique solution:

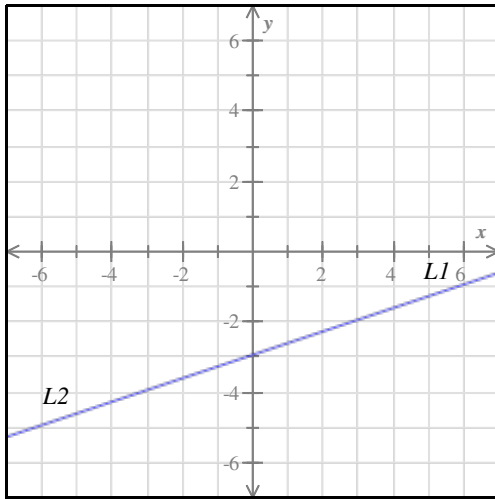
Solution: (,)

- no solution

- infinitely many solutions

$$L1: y = \frac{1}{3}x - 3$$

$$L2: -x + 3y = -9$$



This system of equations is:

- consistent dependent - consistent independent - inconsistent

This means the system has:

- a unique solution:

Solution: (,)

- no solution

- infinitely many solutions

3. Use substitution to solve the system.

$$y = 2x + 5$$

$$-5x + 4y = 14$$

$$x = \boxed{}$$

$$y = \boxed{}$$

4. Solve the following system of equations.

$$-2x + y = 11$$

$$5x + y = -17$$

5. Solve the following system of equations.

$$9x + 8y = 13$$

$$3x + 4y = -1$$

6. Solve the following system of equations.

$$-0.7x + 0.3y = 0.2$$

$$0.08x + 0.15y = -0.76$$

7. A couch and coffee table cost a total of \$996. The cost of the couch is three times the cost of the coffee table. Find the cost of each item.

8. A store is having a sale on trail mix and jelly beans. For 2 pounds of trail mix and 12 pounds of jelly beans, the total cost is \$45. For 5 pounds of trail mix and 3 pounds of jelly beans, the total cost is \$18. Find the cost for each pound of trail mix and each pound of jelly beans.

9. A motorboat takes 4 hours to travel 192 km going upstream. The return trip takes 3 hours going downstream. What is the rate of the boat in still water and what is the rate of the current?

Rate of the boat in still water: km/h

Rate of the current: km/h

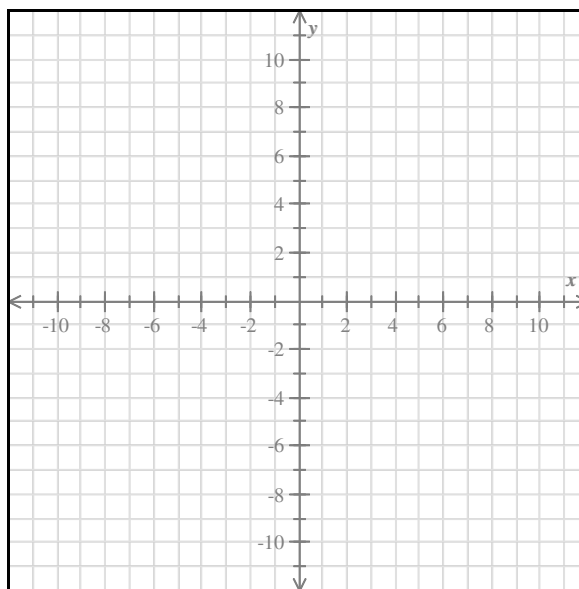
10. A theater group made appearances in two cities. The hotel charge before tax in the second city was \$500 higher than in the first. The tax in the first city was 5.5%, and the tax in the second city was 6.5%. The total hotel tax paid for the two cities was \$482.50. How much was the hotel charge in each city before tax?

11. For each ordered pair (x, y) , determine whether it is a solution to the inequality $7x - 4y \geq 18$.

(x, y)	Is it a solution?	
	Yes	No
$(-3, 2)$	☐	☐
$(-2, -8)$	☐	☐
$(-3, 0)$	☐	☐
$(8, 9)$	☐	☐

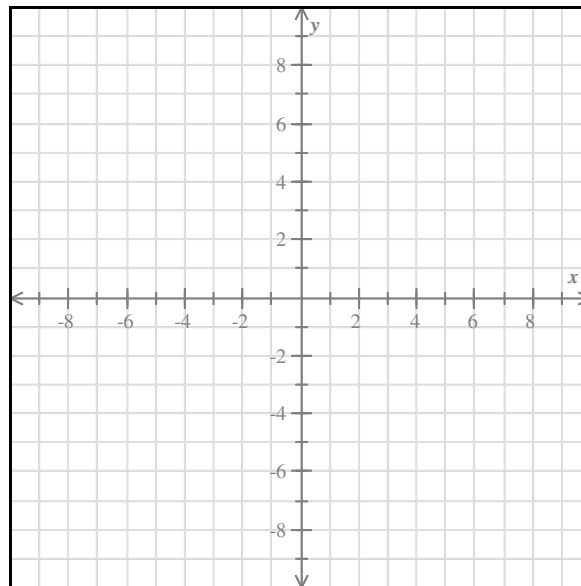
12. Graph the inequality in the coordinate plane.

$$x \geq -7$$



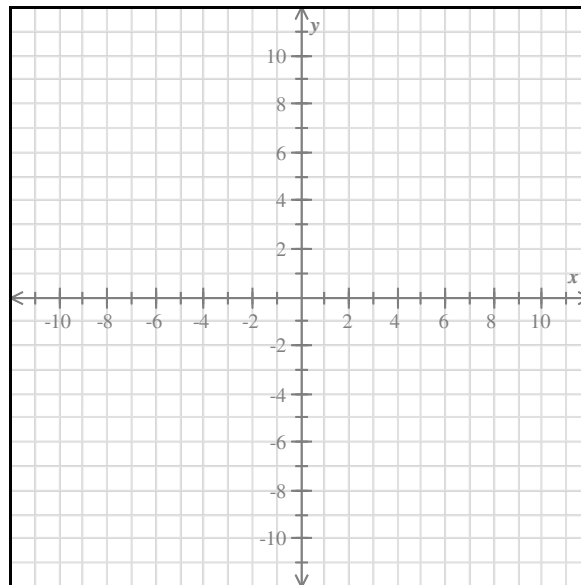
13. Graph the inequality.

$$y \geq x - 1$$



14. Graph the inequality.

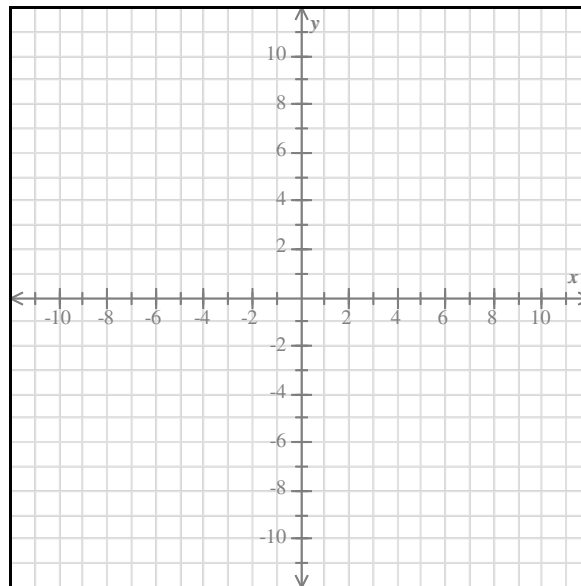
$$4x + y \geq -3$$



15. Graph the solution to the following system of inequalities.

$$y \leq -2x - 9$$

$$y < 3x + 5$$

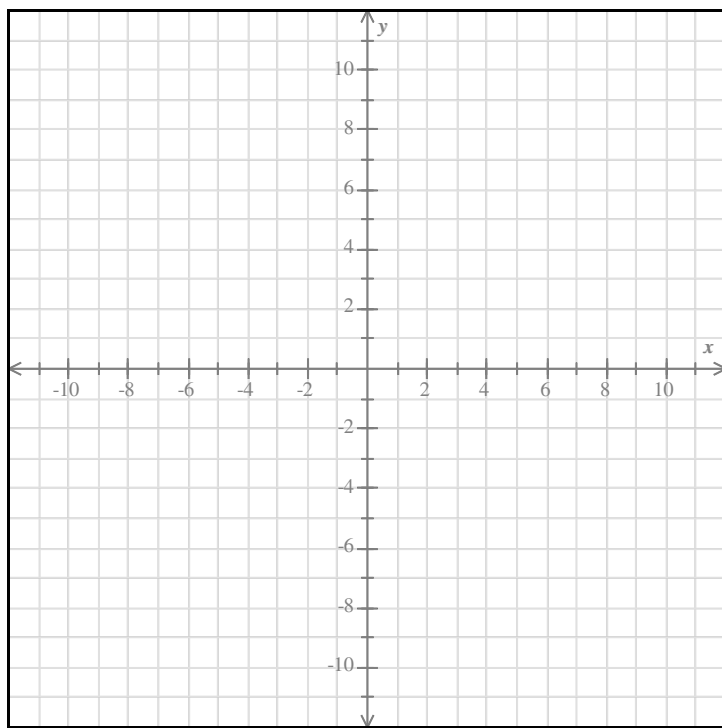


16. Graph the solution to the following system of inequalities.

$$-5x + 3y > -3$$

$$5x + 2y \leq 2$$

Then give the coordinates of one point in the solution set.



Point in the solution set: _____

Quiz 3 Chapter 4 #1 Answers for class *MT* Math 095 MW Fall 18 - Math 095 MW Fall18 B02

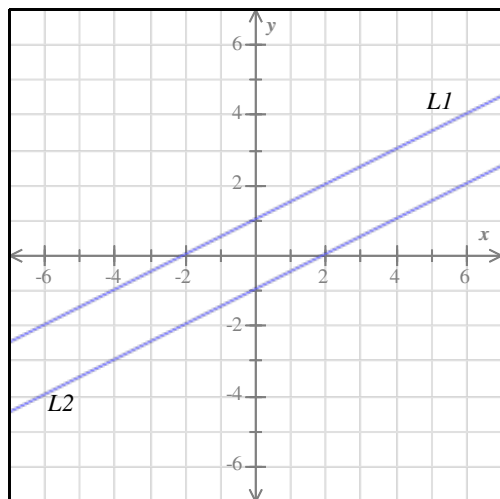
1.

(x, y)	Is it a solution?	
	Yes	No
$(5, 17)$	☒	☐
$(0, 7)$	☐	☒
$(3, -1)$	☐	☒
$(-2, -11)$	☒	☐

2.

$$L1: y = \frac{1}{2}x + 1$$

$$L2: y = \frac{1}{2}x - 1$$



This system of equations is:

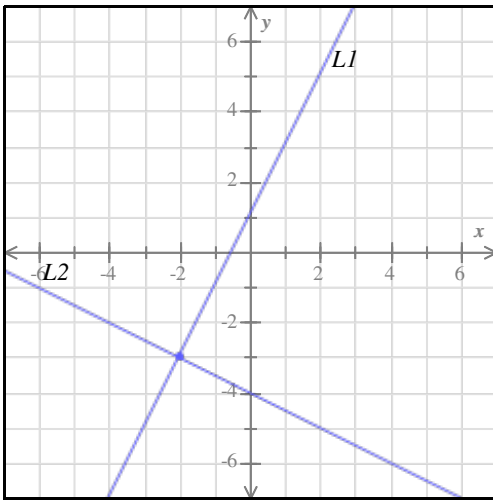
- inconsistent

This means the system has:

- no solution

$$L1: y = 2x + 1$$

$$L2: y = -\frac{1}{2}x - 4$$



This system of equations is:

- consistent independent

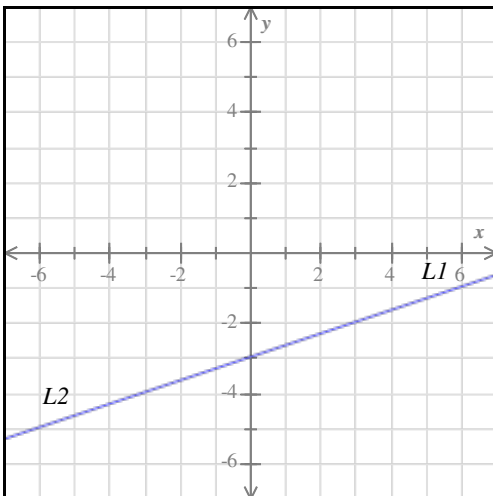
This means the system has:

- a unique solution:

Solution: $(-2, -3)$

$$L1: y = \frac{1}{3}x - 3$$

$$L2: -x + 3y = -9$$



This system of equations is:

- consistent dependent

This means the system has:

- infinitely many solutions

3.

$$x = -2$$

$$y = 1$$

4.

$$x = -4$$

$$y = 3$$

5.

$$x = 5$$

$$y = -4$$

6.

$$x = -2$$

$$y = -4$$

7.

Cost of couch: \$747

Cost of coffee table: \$249

8. Cost for each pound of trail mix: \$1.50

Cost for each pound of jelly beans: \$3.50

9. Rate of the boat in still water: 56 km/h

Rate of the current: 8 km/h

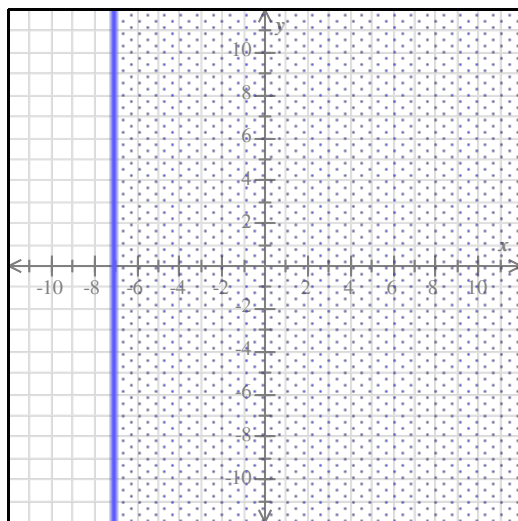
10. First city: \$3750

Second city: \$4250

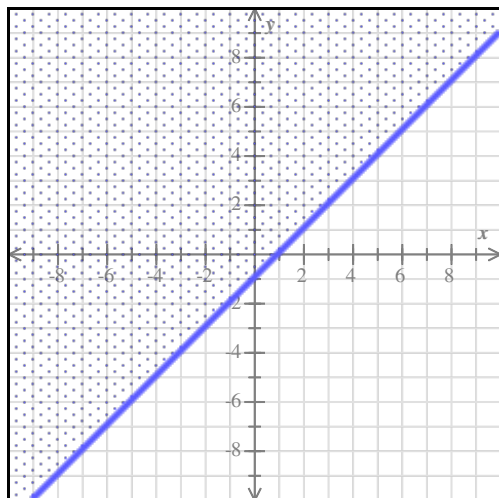
11.

(x, y)	Is it a solution?	
	Yes	No
$(-3, 2)$	☐	☒
$(-2, -8)$	☒	☐
$(-3, 0)$	☐	☒
$(8, 9)$	☒	☐

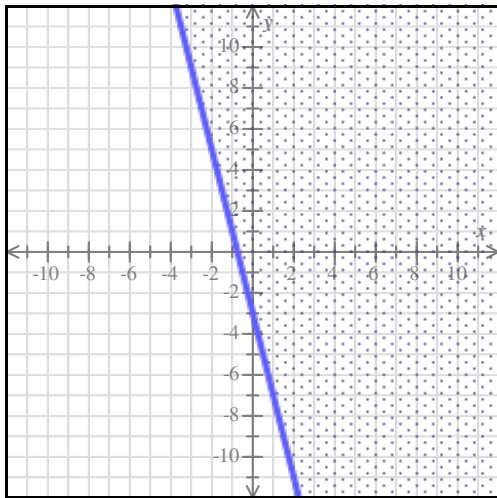
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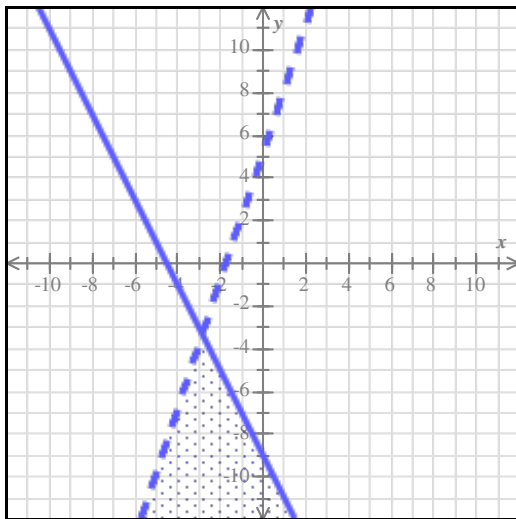
13.



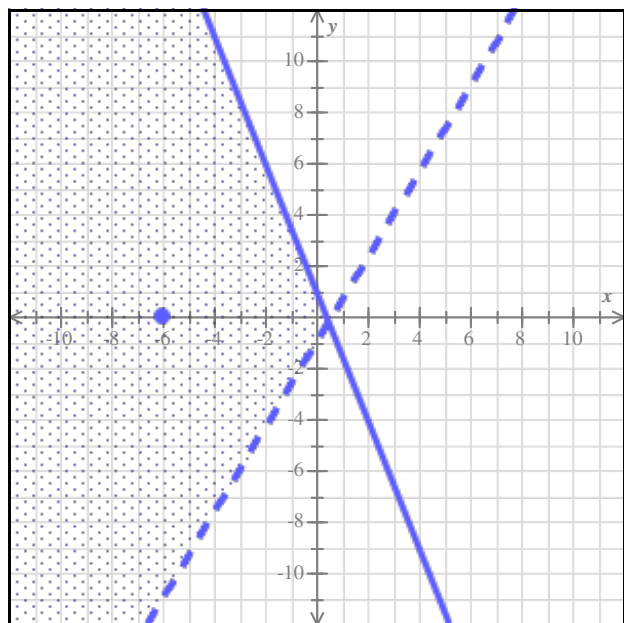
14.



15.



16.



Point in the solution set : $(-6, 0)$