Section 4.1 Systems #3 Answers for class Intermediate Algebra / Copy of MAT 135 Spring 2014

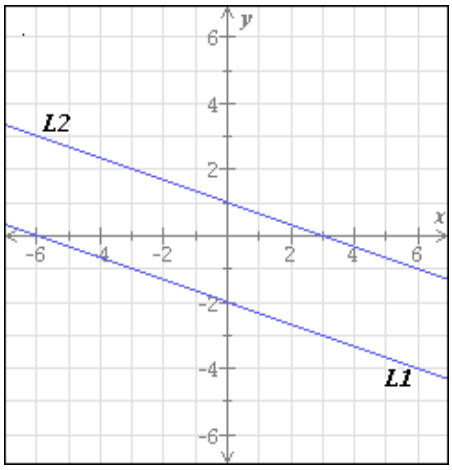
1.

(x, y)	Is it a solution?	
	Yes	No
$(4, -5)$	○	◉
$(0, -3)$	◉	○
$(7, 11)$	◉	○
$(-1, 8)$	○	◉

2.

L1: $y=\frac{-1}{3}x-2$

L2: $y=\frac{-1}{3}x+1$



This system of equations is:

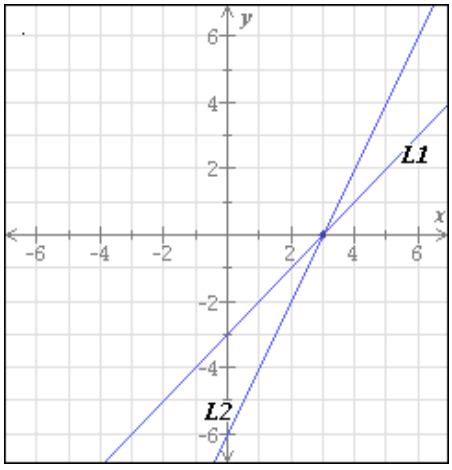
- inconsistent

This means the system has:

- no solution

L1: $y=x-3$

L2: $y=2x-6$



This system of equations is:

- consistent independent

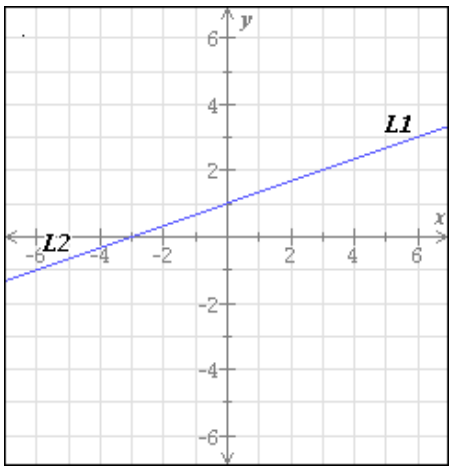
This means the system has:

- a unique solution:

Solution: $(3,0)$

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

L2: $-x+3y=3$



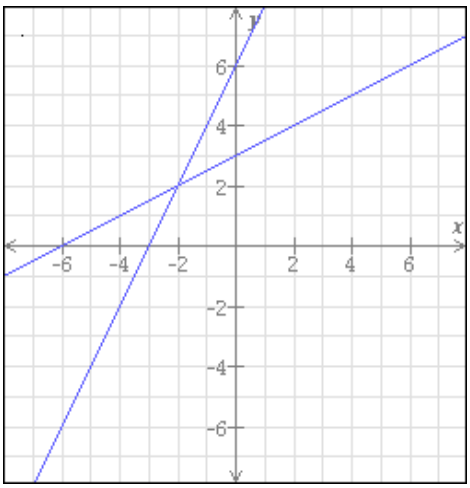
This system of equations is:

- consistent dependent

This means the system has:

- infinitely many solutions

3.



Solution: $(-2, 2)$

4. $x = 1$

$y = -2$

5. $x = 5$

$y = -5$

6. $x = 3$

$y = -5$

7.

$-x+3y=9$ $x-3y=9$	◉ The system has no solution. ○ The system has a unique solution: $(x, y) =$ (□, □) ○ The system has infinitely many solutions. They must satisfy the following equation: $y =$ □
$x-2y=-8$ $-x+2y=8$	○ The system has no solution. ○ The system has a unique solution: $(x, y) =$ (□, □) ◉ The system has infinitely many solutions. They must satisfy the following equation: $y = \frac{x}{2} + 4$

8. Larger number: 42

Smaller number: 25

9. Cost to rent each chair: $2.50

Cost to rent each table: $6.00

10. Johnson family's sprinkler: 15 hours

Rogers family's sprinkler: 30 hours

11. Solution A: 20 ounces

Solution B: 70 ounces

12. Desktop: $2900

Laptop: $2450

13.

(a) If Sam makes 160 minutes of long distance calls for the month, which plan costs less?

Plan B

How much less does it cost than the other plan?
$2

(b) For what number of long distance minutes do the two plans cost the same?

120

If the time spent on long distance calls is less than this amount, which plan costs less?
Plan A