

3.1 Cont.: Solving Linear Systems using a Table and Graphing

Learning Targets for today

- ① To be able to solve linear systems by using a table.
- ① To be able to solve linear systems by graphing.

Vocabulary

Table of Values for an Equation – a two column table that represents that values you put in for “x” and the values you get back for “y”

Ex: $y = x + 1$ INPUT OUTPUTS

x	y
0	1
1	2
2	3
3	4

Table of Values for Two Equations – a three-column table that represents both equations of the system.

Ex: $y_1 = 5x - 3$

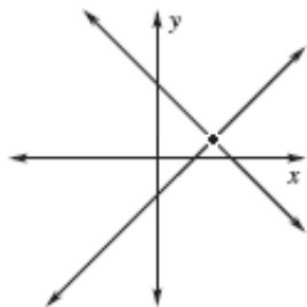
$y_2 = 3x + 1$ INPUT

x	y_1	y_2
0	-3	1
1	2	4
2	7	7
3	12	10

(2,7)

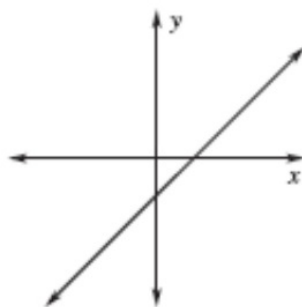
Three Different Types of Solutions – One Solution (x, y), Infinitely Many solutions, or No Solutions.

Exactly one solution



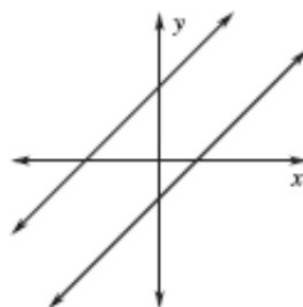
* A Consistent system that is **independent!**

Infinitely many solutions



* A Consistent system that is **dependent!**

No Solutions



* An **Inconsistent** system!

Solve by using a table.

Use a table to solve the system.

1. • $y = 2x - 13$

• $y = x - 9$

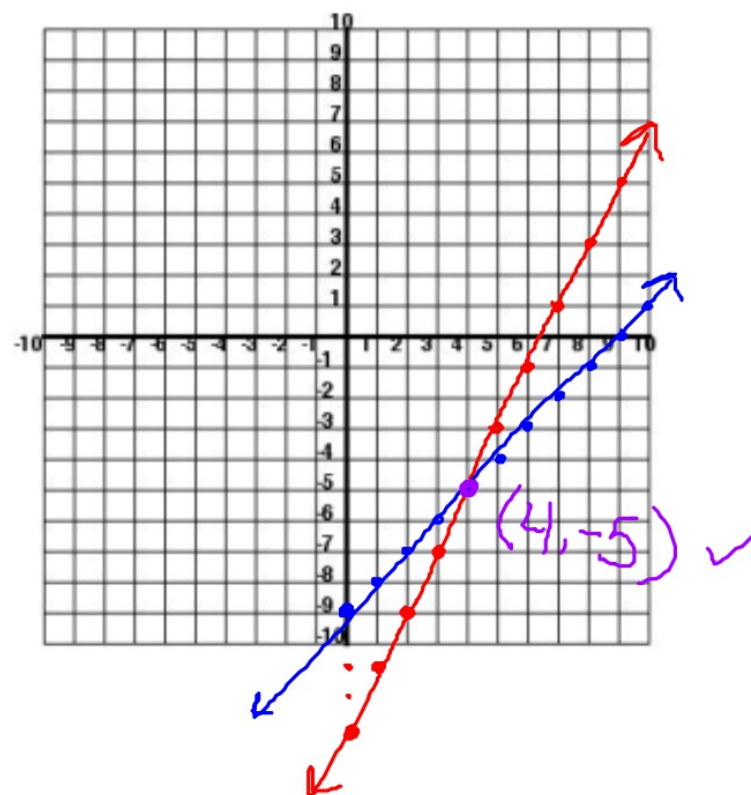
X	Y ₁	Y ₂
0	-13	-9
1	-11	-8
2	-9	-7
3	-7	-6
4	-5	-5

(4, -5)

Graph the linear system.

1. • $y = 2x - 13$

$y = x - 9$



Solve by using a table. → YOUR TURN!

Use a table to solve the system.

$$\begin{array}{r} 2. \quad y_1 = x + 1 \\ \quad 2x + y_2 = 10 \\ \quad \underline{-2x \quad -2x} \\ \quad y_2 = -2x + 10 \end{array}$$

x	y ₁	y ₂
0	1	10
1	2	8
2	3	6
3	4	4
4	5	2

(3, 4)

Graph the linear system.

$$\begin{array}{r} 2. \quad y = x + 1 \\ \quad 2x + y = 10 \\ \quad \underline{-2x \quad -2x} \end{array}$$

