

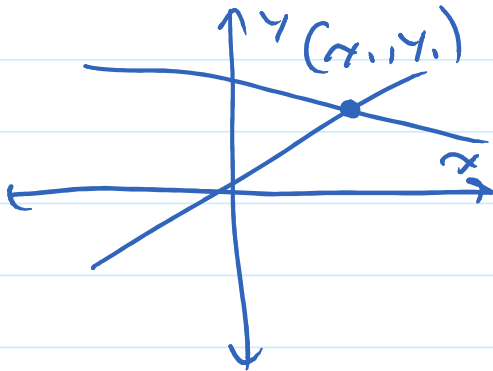
SEC 5.1

SYSTEMS OF EQUATIONS

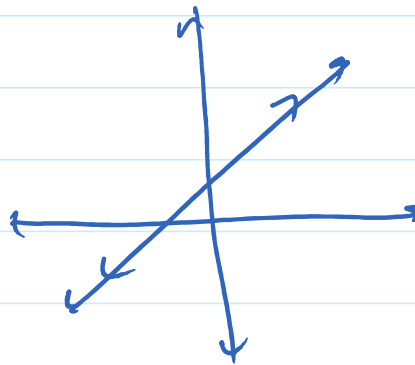
SYSTEM OF LINEAR EQUATIONS - SET OF TWO OR MORE LINEAR EQUATIONS IN THE SAME VARIABLES

$$\begin{cases} y = 2x - 3 \\ y = 3x + 5 \end{cases}$$

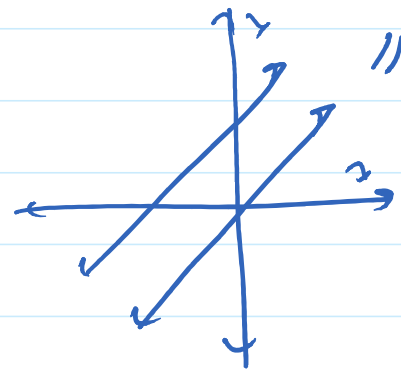
SOLUTION OF THE SYSTEM - AN ORDERED PAIR THAT SATISFIES BOTH EQUATIONS



SOLUTION (x, y)



∞ SOLUTIONS
SOLUTION IS LINE



\emptyset
NO SOLUTION

CHECK SOLUTIONS - TRY IN BOTH EQUATIONS

(5, 1) C) THE POINT IS SOLUTIONS

$$\begin{cases} x + y = 6 & 5 + 1 = 6 \checkmark \\ 2x - y = 9 & 2(5) - 1 = 9 \checkmark \end{cases} \quad \text{YES}$$

CONCEPT

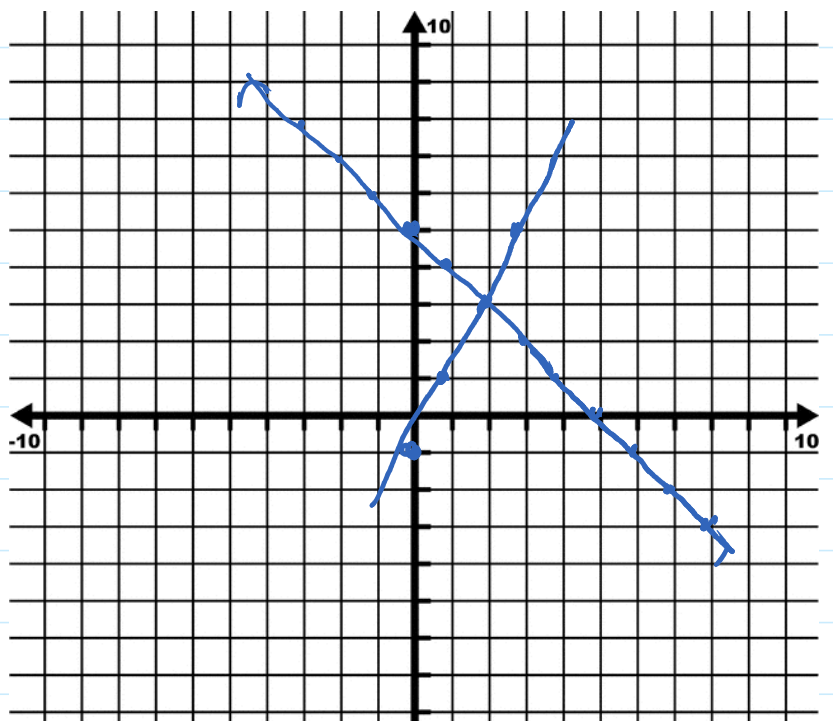
Solve by Graphing

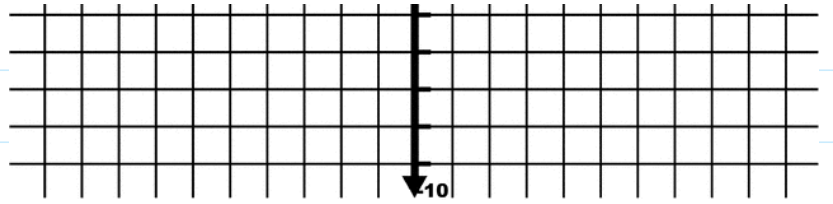
- 1) Graph both lines
- 2) Find intersection
- 3) Write as ordered pair

$$\begin{cases} y = -x + 5 \\ y = 2x - 1 \end{cases}$$

Solution

(2, 3)





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1) GRAPH

2) FIND INTERSECTION

A) FROM GRAPH

B) FROM TABLE

C) USING GIVE INTERSECTION

3) Give Solution as Ordered Pair

$$\begin{cases} y = -x + 5 \\ y = 2x - 1 \end{cases}$$