

# Linear Systems: Choose a Method

Date Notes

## PRACTICE QUESTIONS

### PART A: Which Method Would You Choose?

A: Which method would you choose to solve: Substitution

$$3x + 2y = 14 \quad \textcircled{1}$$

$$y = 5x - 6 \quad \textcircled{2}$$

Give reasons for your choice:

"y" is already isolated  $\therefore$  you can sub  $\textcircled{2}$  into  $\textcircled{1}$  easily.

B: Which method would you choose to solve:

$$y = x + 1 \quad \textcircled{1}$$

$$y = 2x - 3 \quad \textcircled{2}$$

Give reasons for your choice: Graph OR Sub.

Graph using y-int. and slope OR sub  $\textcircled{1}$  into  $\textcircled{2}$ .

C: Which method would you choose to solve: Elimination

$$2x - 3y = 3 \quad \textcircled{1} \times 3 \rightarrow 6x - 9y = 9$$

$$3x - 5y = 3 \quad \textcircled{2} \times 2 \rightarrow 6x - 10y = 6$$

$$\underline{0 + y = 3}$$

$$\boxed{y = 3}$$

Give reasons for your choice:

sub  $\textcircled{2}$  into  $\textcircled{1}$

$$3x + 2(5x - 6) = 14$$

$$3x + 10x - 12 = 14$$

$$\frac{13x}{13} = \frac{26}{13}$$

$$\boxed{x = 2}$$

sub.  $x=2$  into  $\textcircled{2}$

$$y = 5(2) - 6$$

$$y = 10 - 6$$

$$\boxed{y = 4}$$

$\therefore$  POI is (2,4)

+ see graph below.

POI is (4,5)

Sub.  $y=3$  into  $\textcircled{1}$

$$2x - 3(3) = 3$$

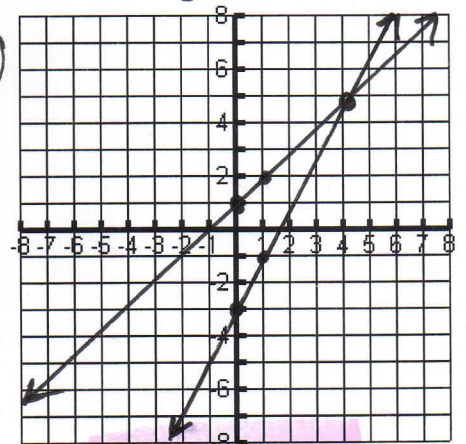
$$2x - 9 = 3$$

$$\frac{2x}{2} = \frac{12}{2}$$

$$\boxed{x = 6}$$

POI is (6,3)

**PART B:** Using a separate paper, SOLVE EACH OF THE 3 SYSTEM OF EQUATIONS ABOVE using the method that you chose. A grid has been provided to you on the right in case you choose to graph one of the solutions.



POI (4,5)