

EXAMPLE #3

Did you
get
 $(-2, 3)$?

Solve the linear system.

$$\textcircled{1} \quad 5x - 2y = -16$$

$$\textcircled{2} \quad -2x + y = 7 \rightarrow \text{isolate } y$$

$$-2x + 2x + y = 7 + 2x$$

Subst. $\textcircled{3}$ into $\textcircled{1}$

$$\textcircled{3} \quad y = 7 + 2x$$

$$5x - 2y = -16$$

$$5x - 2(7 + 2x) = -16$$

$$5x - 2(7 + 2x) = -16$$

$$5x - 14 - 4x = -16$$

Simplify & solve for x

$$-1x - \cancel{14} + \cancel{14} = -16 + 14$$

$$-1x = -16 + 14$$

$$\boxed{x = -2}$$

Substitute $x = -2$ into ③

$$y = 7 + 2x$$

$$y = 7 + 2(-2)$$

$$y = 7 - 4$$

$$\boxed{y = 3}$$

$\therefore (-2, 3)$ is the P.O.I.

Check $(-2, 3)$

① $5x - 2y = -16$

LS	RS
$5x - 2y$	-16
$5(-2) - 2(3)$	✓
$-10 - 6$	
-16 ✓	

LS = RS

② $-2x + y = 7$

LS	RS
$-2x + y$	7 ✓
$-2(-2) + 3$	
$4 + 3$	
7 ✓	

LS = RS.

EXAMPLE #4

Did you
get
(2,5)?

Solve the linear system.

$$\textcircled{1} \quad y = -2x + 9$$

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

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

$$3x - 1 = -2x + 9$$

Sub $x = 2$ into $\textcircled{1}$

$$3x - 1 + 1 = -2x + 9 + 1$$

$$3x = -2x + 10$$

$$3x + 2x = -2x + 2x + 10$$

$$5x = 10$$

$$x = 2$$

$\therefore (2, 5)$ is P.O.I.

$$y = -2x + 9$$

$$y = -2(2) + 9$$

$$y = -4 + 9$$

$$y = 5$$

REINFORCEMENT



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