

11-13-19

Solve the following system of equations by elimination.

1. $-4x + 5y = 47$
 $2x + 9y = 57$

2. $4x + 7y = 47$
 $5x + 2y = 25$

1. $-4x + 5y = 47$
 $2(2x + 9y = 57)$ →

$$\begin{array}{r} \cancel{-4x} + 5y = 47 \\ + \cancel{4x} + 18y = 114 \\ \hline 23y = 161 \\ \frac{23}{23} \quad \frac{161}{23} \\ \hline y = 7 \end{array}$$

$(-3, 7)$

$$\begin{array}{r} 2x + 9(7) = 57 \\ 2x + 63 = 57 \\ \underline{-63 \quad -63} \\ 2x = -6 \\ \frac{2}{2} \quad \frac{-6}{2} \\ x = -3 \end{array}$$

$$\begin{array}{l} -4(-3) + 5(7) = 47 \\ 12 + 35 = 47 \\ 47 = 47 \quad \checkmark \end{array}$$

$$\begin{array}{l}
 2 \cdot 5(4x + 7y = 47) \longrightarrow 20x + 35y = 235 \\
 -4(5x + 2y = 25) \longrightarrow -20x - 8y = -100 \\
 \hline
 27y = 135 \\
 \frac{27}{27} \frac{135}{27} \\
 y = 5
 \end{array}$$

(3, 5)

$$\begin{array}{l}
 4x + 7(5) = 47 \\
 4x + 35 = 47 \\
 -35 \quad -35 \\
 \hline
 4x = 12 \\
 \frac{4x}{4} = \frac{12}{4} \\
 x = 3
 \end{array}$$

$$\begin{array}{l}
 5(3) + 2(5) = 25 \\
 15 + 10 = 25 \\
 25 = 25 \checkmark
 \end{array}$$

When you are done with the quiz...

- Work on your summary sheet (elimination)
- English
 - Intro paragraph due Friday
 - Whole essay due next week
- Science
 - Study for today's test
 - Lab 12
 - Any missing labs
- Mindful silence
- Read a book