

MGF /

Solving a system of linear equations using elimination with addition

Solving a system of linear equations using elimination with addition

Solve the following system of equations.

$$\begin{aligned} 2x + y &= 10 \\ -5x - y &= -19 \end{aligned}$$

$x = \square$
 $y = \square$

$\times$ $\div$

$$\begin{array}{r} 2x + y = 10 \\ + \quad -5x - y = -19 \\ \hline -3x = -9 \\ \frac{-3x}{-3} = \frac{-9}{-3} \end{array}$$

$x = 3$ Plug it in x

$$\begin{aligned} 2(3) + y &= 10 \\ 6 + y &= 10 \\ -6 & \quad -6 \\ y &= 4 \end{aligned} \quad (3, 4)$$

Solving a system of linear equations using elimination with addition

Solve the following system of equations.

$$\begin{aligned} 5x + 6y &= -10 \\ 5x + 3y &= 20 \end{aligned}$$

$x = \square$
 $y = \square$

$\times$ $\div$

$$\begin{array}{r} 5x + 6y = -10 \\ -1(5x + 3y = 20) \quad + \quad -5x - 3y = -20 \\ \hline 3y = -30 \\ \frac{3y}{3} = \frac{-30}{3} \end{array}$$

$y = -10$

Plug it in x

$$5x + 6(-10) = -10$$

$$5x - 60 = -10$$

$$+60 \quad +60$$

$$\frac{5x}{5} = \frac{50}{5}$$

$x = 10$

$(10, -10)$

Solving a system of linear equations using elimination with addition

Solve the following system of equations.

$$\begin{aligned} 5x + 6y &= -5 \\ 5x + 3y &= 10 \end{aligned}$$

$x = \square$
 $y = \square$

$\times$ $\div$

$$\begin{array}{r} 5x + 6y = -5 \\ -1(5x + 3y = 10) \quad + \quad -5x - 3y = -10 \\ \hline 3y = -15 \\ \frac{3y}{3} = \frac{-15}{3} \end{array}$$

$y = -5$

Plug it in x

$$5x + 6(-5) = -5$$

$$5x - 30 = -5$$

$$+30 \quad +30$$

$$\frac{5x}{5} = \frac{25}{5}$$

$x = 5$

$(5, -5)$