

What Kind of Shoes Does a Frog Wear?

Solve each system of equations by the addition method. (You may first have to multiply both sides of one equation by -1 .) Find your answer below and cross out the letter above it. When you finish, the answer to the title question will remain.

$$\begin{array}{l} \textcircled{1} \quad 5x - 2y = 4 \\ + \quad (x + 2y = 8) \\ \hline 6x = 12 \end{array}$$

$(2, 3)$

$$\begin{array}{l} \textcircled{2} \quad -3x + 2y = 11 \\ + \quad (3x - 4y = -19) \\ \hline -2y = -8 \end{array}$$

$(-1, 4)$

$$\begin{array}{l} \textcircled{3} \quad 3x + y = 13 \\ - \quad (x + y = 3) \\ \hline 2x = 10 \end{array}$$

$(5, -2)$

$$\begin{array}{l} \textcircled{4} \quad 6x - 2y = 10 \\ - \quad (x - 2y = -5) \\ \hline 5x = 15 \end{array}$$

$(3, 4)$

$$\begin{array}{l} \textcircled{5} \quad 5x + y = 2 \\ - \quad (5x - 3y = 14) \\ \hline 4y = -12 \end{array}$$

$(1, -3)$

$$\begin{array}{l} \textcircled{6} \quad 7x - 4y = -10 \\ 4y = x - 2 \\ + \quad (-x + 4y = -2) \\ \hline 6x = -12 \end{array}$$

$(-2, 1)$

$$\begin{array}{l} \textcircled{7} \quad x + 9y = 5 \\ 4x + 9y = -7 \\ - \quad (4x + 9y = -7) \\ \hline -3x = 12 \end{array}$$

$(-4, 1)$

$$\begin{array}{l} \textcircled{8} \quad 3x = 5y - 9 \\ 2y = 3x + 3 \\ - \quad (3x + 2y = 3) \\ \hline -3y = -6 \end{array}$$

$(\frac{1}{3}, 2)$

$$\begin{array}{l} \textcircled{9} \quad x + 2y = -2 \\ - \quad (4x + 2y = -17) \\ \hline -3x = 15 \end{array}$$

$(-5, \frac{3}{2})$

$$\begin{array}{l} \textcircled{10} \quad -6x - 5y = 20 \\ -y = 6x + 4 \\ - \quad (-6x - y = 4) \\ \hline -4y = 16 \end{array}$$

$(0, -4)$

$$\begin{array}{l} \textcircled{11} \quad -3x + y = -2 \\ -2 = 7x - y \\ + \quad (7x - y = -2) \\ \hline 4x = -4 \end{array}$$

$(-1, -5)$

$$\begin{array}{l} \textcircled{12} \quad 10x - 5 = 3y \\ 2x - 3y = 1 \\ - \quad (2x - 3y = 1) \\ \hline 8x = 4 \end{array}$$

$(\frac{1}{2}, 0)$

S	V	O	P	R	E	S	A	N	T	O	E	X	A	V	D	R
$(0, -4)$	$(3, 7)$	$(\frac{5}{3}, 0)$	$(3, 4)$	$(2, 2)$	$(2, 3)$	$(-4, 1)$	$(2, -4)$	$(-2, 2)$	$(-1, -5)$	$(-1, 6)$	$(-1, 4)$	$(-5, \frac{2}{3})$	$(5, -3)$	$(5, -2)$	$(-5, 4)$	$(1, -3)$

OPEN TOAD

KEY

① $\frac{6x}{6} = \frac{12}{6}$ $x + 2y = 8$
 $x = 2$ $x + 2y = 8$
 $2 + 2y = 8$
 $2y = 6$
 $y = 3$
(2, 3)

② $-\frac{2x}{-2} = \frac{-8}{-2}$ $-3x + 2y = 11$
 $x = 4$ $-3x + 2y = 11$
 $-3(4) + 2y = 11$
 $-12 + 2y = 11$
 $2y = 23$
 $y = 11.5$
(-1, 4)
 $-\frac{3x}{-3} = \frac{3}{-3}$
 $x = -1$

③ $\frac{2x}{2} = \frac{10}{2}$ $x + y = 3$
 $x = 5$ $x + y = 3$
 $5 + y = 3$
 $y = -2$
(5, -2)

④ $\frac{5x}{5} = \frac{15}{5}$ $x - 2y = -5$
 $x = 3$ $x - 2y = -5$
 $3 - 2y = -5$
 $-2y = -8$
 $y = 4$
(3, 4)

⑤ $\frac{4x}{4} = \frac{-12}{4}$ $5x + y = 2$
 $y = -3$ $5x + y = 2$
 $5x - 3 = 2$
 $5x = 5$
 $x = 1$
(1, -3)

⑥ $\frac{6x}{6} = \frac{-12}{6}$ $4y = x - 2$
 $x = -2$ $4y = x - 2$
 $4y = -2 - 2$
 $4y = -4$
 $y = -1$
(-2, -1)

⑦ $-\frac{3x}{-3} = \frac{12}{-3}$ $x = 5 - 9y$
 $x = -4$ $x = 5 - 9y$
 $-4 = 5 - 9y$
 $-9 = -9y$
 $1 = y$
(-4, 1)

⑧ $-\frac{3x}{-3} = \frac{-6}{-3}$ $2y = 3x + 3$
 $y = 2$ $2y = 3x + 3$
 $4 = 3x + 3$
 $1 = 3x$
 $\frac{1}{3} = x$
($\frac{1}{3}, 2$)

⑨ $-\frac{3x}{-3} = \frac{15}{-3}$ $x + 2y = -2$
 $x = -5$ $x + 2y = -2$
 $-5 + 2y = -2$
 $2y = 3$
 $y = \frac{3}{2}$
(-5, $\frac{3}{2}$)

⑩ $-\frac{4x}{-4} = \frac{16}{-4}$ $-y = 6x + 4$
 $y = -4$ $-y = 6x + 4$
 $4 = 6x + 4$
 $0 = 6x$
 $0 = x$
(0, -4)

⑪ $\frac{4x}{4} = \frac{-4}{4}$ $-2 = 7x - y$
 $x = -1$ $-2 = 7x - y$
 $-2 = 7(-1) - y$
 $-2 = -7 - y$
 $5 = -y$
 $y = -5$
(-1, -5)

⑫ $\frac{8x}{8} = \frac{4}{8}$ $2x - 3y = 1$
 $x = \frac{1}{2}$ $2x - 3y = 1$
 $1 - 3y = 1$
 $-3y = 0$
 $y = 0$
($\frac{1}{2}, 0$)