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.

(1) $5x - 2y = 4$
$x + 2y = 8$

(2) $-3x + 2y = 11$
$3x - 4y = -19$

(3) $3x + y = 13$
$x + y = 3$

(4) $6x - 2y = 10$
$x - 2y = -5$

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

(6) $7x - 4y = -10$
$4y = x - 2$

(7) $x = 5 - 9y$
$4x + 9y = -7$

(8) $3x = 5y - 9$
$2y = 3x + 3$

(9) $x + 2y = -2$
$4x + 2y = -17$

(10) $-6x - 5y = 20$
$-y = 6x + 4$

(11) $-3x + y = -2$
$-2 = 7x - y$

(12) $10x - 5 = 3y$
$2x - 3y = 1$

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

OBJECTIVE 6–d: To solve systems of equations by the addition method (multiplication by -1 may be required).

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.

(1) $5x - 2y = 4$

$+\ x + 2y = 8$

$\frac{6x}{6} = \frac{12}{6}$

$x = 2$

$x + 2y = 8$

$2 + 2y = 8$

$-2 \quad -2$

$\frac{2y}{2} = \frac{6}{2}$

$y = 3$

(2,3)

(5) $5x + y = 2$

$-\ 5x - 3y = 14$

$\frac{4y}{4} = \frac{-12}{4}$

$y = -3$

$5x + y = 2$

$5x + (-3) = 2$

$+3 \quad +3$

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

$x = 1$

(1,−3)

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

$-\ 4x + 2y = -17$

$\frac{-3x}{-3} = \frac{15}{-3}$

$x = -5$

$x + 2y = -2$

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

$+5 \quad +5$

$\frac{2y}{2} = \frac{3}{2}$

$y = \frac{3}{2}$

(−5, 3/2)

(2) $-3x + 2y = 11$

$+\ 3x - 4y = -19$

$\frac{-2y}{-2} = \frac{-8}{-2}$

$y = 4$

$3x - 4y = -19$

$3x - 4(4) = -19$

$3x - 16 = -19$

$+16 \quad +16$

$\frac{3x}{3} = \frac{-3}{3}$

$x = -1$

$(-1, 4)$

(6) $7x - 4y = -10$

$4y = x - 2$

$-x \quad -x$

$4y - x = -2$

$7x - 4y = -10$

$+\ -x + 4y = -2$

$\frac{6x}{6} = \frac{-12}{6}$

$x = -2$

$4y = x - 2$

$4y = (-2) - 2$

$\frac{4y}{4} = \frac{-4}{4}$

$y = -1$

$(-2, -1)$

(10) $-6x - 5y = 20$

$-y = 6x + 4$

$-6x \quad -6x$

$-6x - y = 4$

$-6x - 5y = 20$

$-\ -6x - y = 4$

$\frac{-4y}{-4} = \frac{16}{-4}$

$y = -4$

$-y = 6x + 4$

$-(-4) = 6x + 4$

$4 = 6x + 4$

$-4 \quad -4$

$\frac{0}{6} = \frac{6x}{6}$

$0 = x$

$(0, -4)$

③ $3x + y = 13$

$-\ x + y = 3$

$2x = 10$

$\frac{2x}{2} = \frac{10}{2}$

$x = 5$

$x + y = 3$

$5 + y = 3$

$-5 \quad -5$

$y = -2$

$(5, -2)$

⑦ $x = 5 - 9y$

$4x + 9y = -7$

$x = 5 - 9y$

$+9y \quad +9y$

$x + 9y = 5$

$x + 9y = 5$

$-\ 4x + 9y = -7$

$-3x = 12$

$\frac{-3x}{-3} = \frac{12}{-3}$

$x = -4$

$x = 5 - 9y$

$-4 = 5 - 9y$

$-5 \quad -5$

$-9 = -9y$

$\frac{-9}{-9} = \frac{-9y}{-9}$

$1 = y$

$(-4, 1)$

⑪ $-3x + y = -2$

$-2 = 7x - y$

turned equation around

$-3x + y = -2$

$+\ 7x - y = -2$

$4x = -4$

$\frac{4x}{4} = \frac{-4}{4}$

$x = -1$

$-3x + y = -2$

$-3(-1) + y = -2$

$3 + y = -2$

$-3 \quad -3$

$y = -5$

$(-1, -5)$

④ $6x - 2y = 10$

$-\ x - 2y = -5$

$\frac{5x}{5} = \frac{15}{5}$

$x = 3$

$x - 2y = -5$

$3 - 2y = -5$

$-3 \quad -3$

$\frac{-2y}{-2} = \frac{-8}{-2}$

$y = 4$

$(3, 4)$

⑧ $3x = 5y - 9$

$2y = 3x + 3$

$3x - 5y = -9$

$+\ -3x + 2y = 3$

$\frac{-3y}{-3} = \frac{-6}{-3}$

$y = 2$

$3x = 5y - 9$

$3x = 5(2) - 9$

$\frac{3x}{3} = \frac{1}{3}$

$x = \frac{1}{3}$

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

⑫ $10x - 5 = 3y$

$2x - 3y = 1$

$10x - 5 = 3y$

$+5 \quad +5$

$10x = 3y + 5$

$-3y \quad -3y$

$10x - 3y = 5$

$10x - 3y = 5$

$-\ 2x - 3y = 1$

$\frac{8x}{8} = \frac{4}{8}$

$x = \frac{1}{2}$

$10x - 5 = 3y$

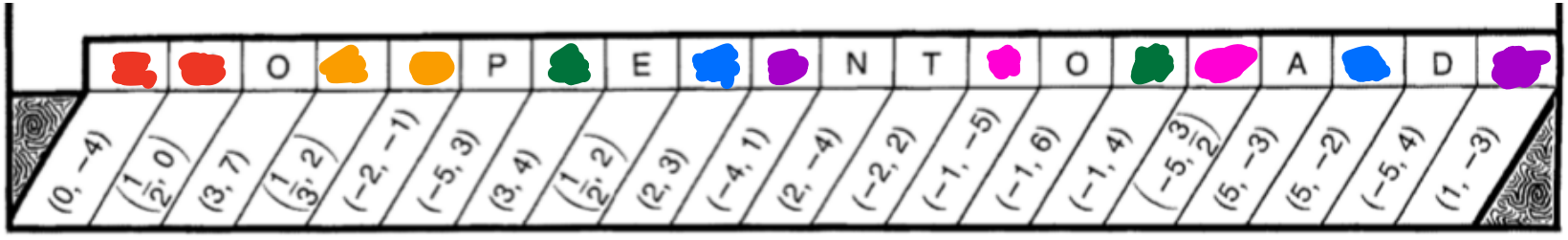
$10(\frac{1}{2}) - 5 = 3y$

$5 - 5 = 3y$

$\frac{0}{3} = \frac{3y}{3}$

$0 = y$

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



OPEN TOAD

(open toad)