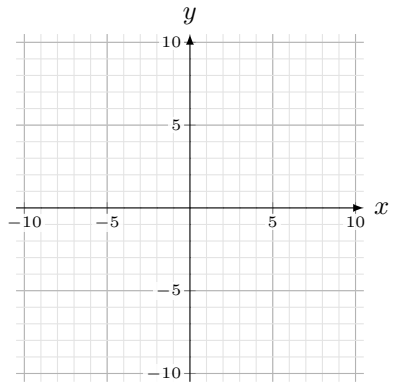
Solving Systems of Linear Equations by Graphing

Graph both lines on the grid, then read off where they meet. Is there a solution? If so, what is it?

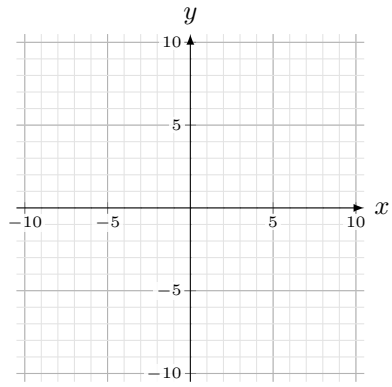
1. Solve each system of linear equations by graphing.

a) $y = 2x + 3$
$y = 4x - 1$



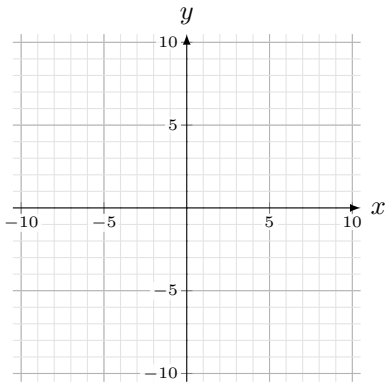
Solution?

b) $y = -x - 7$
$y = 3x + 5$



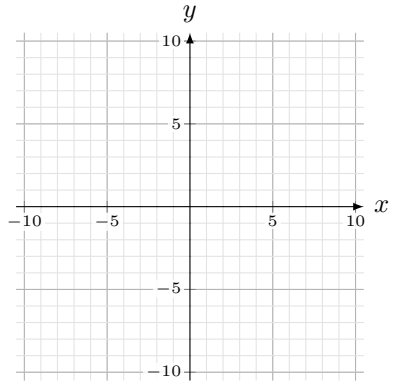
Solution?

c) $3x - 2y = 12$
$2y - x = -8$



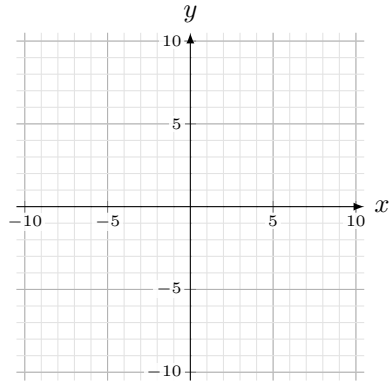
Solution?

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



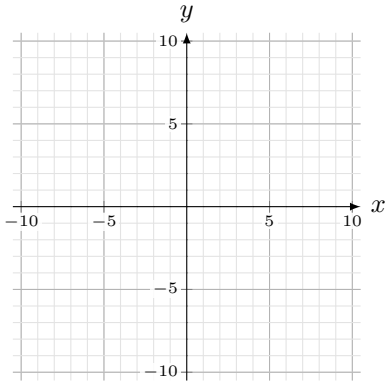
Solution?

e) $6x - 2y = 12$
$8x - 4y = 24$



Solution?

f) $6x - 10y = 30$
$y = \frac{3}{5}x - 3$



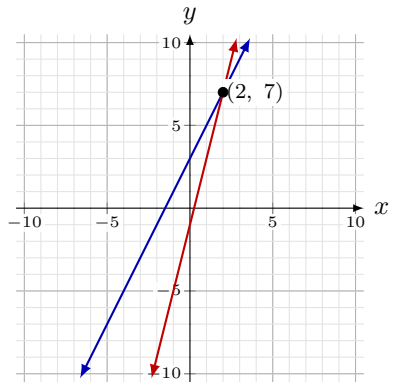
Solution?

Solving Systems of Linear Equations by Graphing — Final Answers

Final answers only. On each graph, the first equation is blue and the second is red.

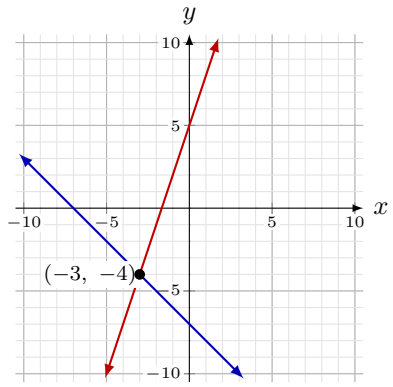
1.

a) $y = 2x + 3$
$y = 4x - 1$



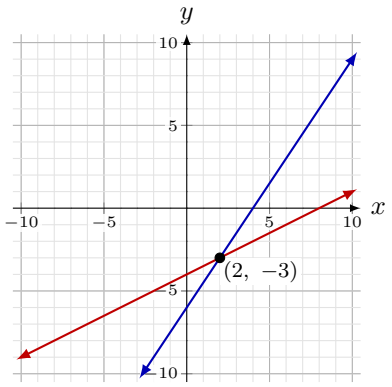
$(2,\ 7)$

b) $y = -x - 7$
$y = 3x + 5$



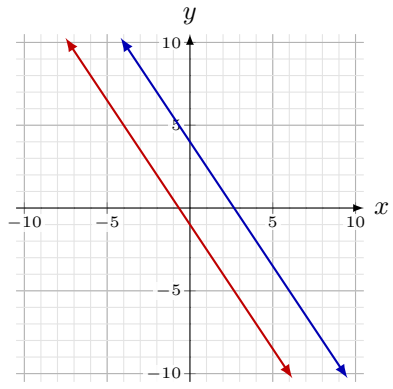
$(-3,\ -4)$

c) $3x - 2y = 12$
$2y - x = -8$



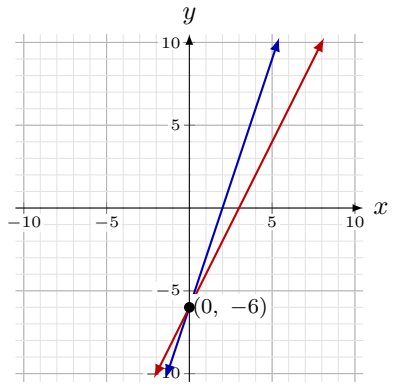
$(2,\ -3)$

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



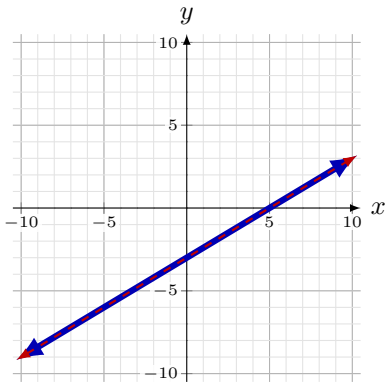
no solution: the lines are parallel (same slope, different y-intercepts)

e) $6x - 2y = 12$
$8x - 4y = 24$



$(0,\ -6)$

f) $6x - 10y = 30$
$y = \frac{3}{5}x - 3$



infinitely many solutions: the same line (same slope, same y-intercept)