Solving Systems of Linear Equations by Graphing
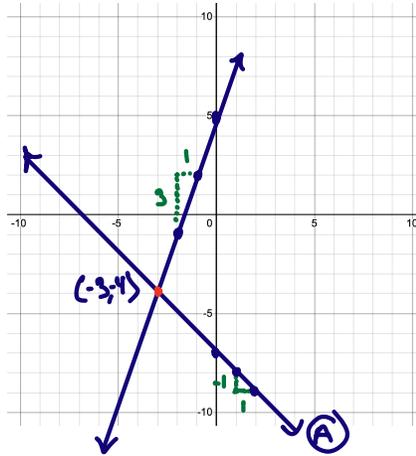
1. Solve each system of linear equations by graphing.
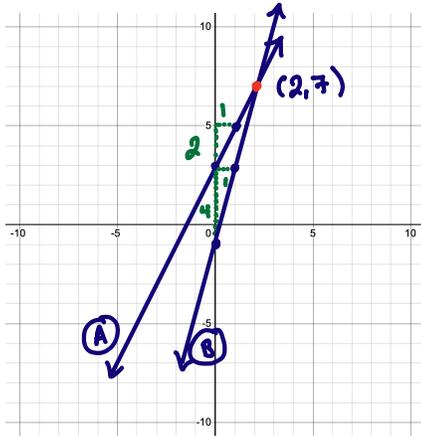
→ graph using intercepts

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

b)
$y = -x - 7$ (A)
$y = 3x + 5$ (B)

c)
$3x - 2y = 12$ (A)
$2y - x = -8$ (B)

Solution? yes, (2,7)
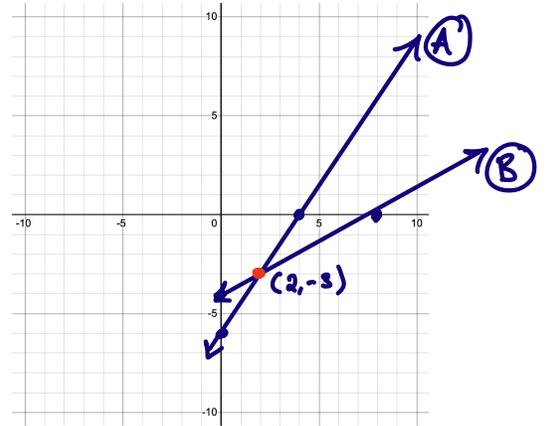
Solution? yes, (-3,-4)

Solution? yes, (2,-3)

d)
$y = -\dfrac{3}{2}x + 4$ (A)
$y = -\dfrac{6}{4}x - 1$ (B)

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

f)
$6x - 10y = 30$ (A)
$y = \dfrac{3}{5}x - 3$ (B)
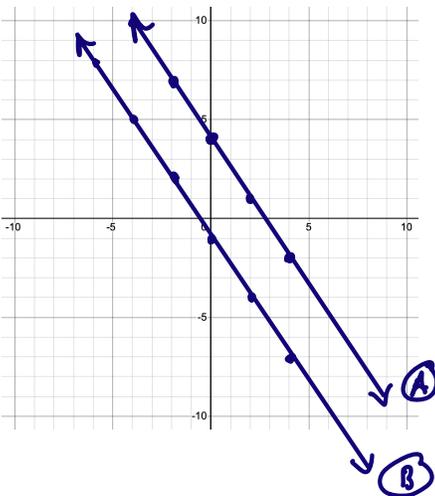
Solution? no, lines are parallel

(same slope, different intercepts)
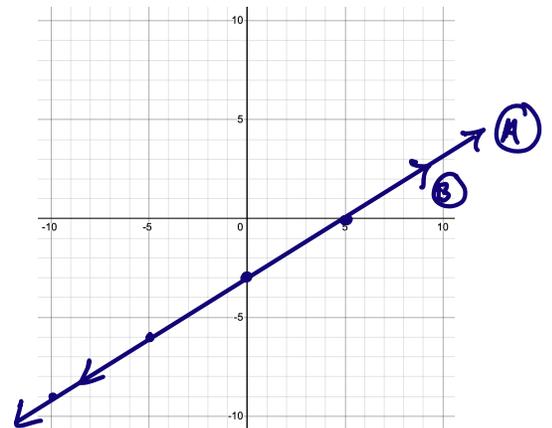
Solution? yes, (0,-6)

Solution? yes, infinitely many solutions

(same slope, same y-intercept)