ALGEBRA 1
Notes 7.1

Name:_____
Date:_____ Block:_____

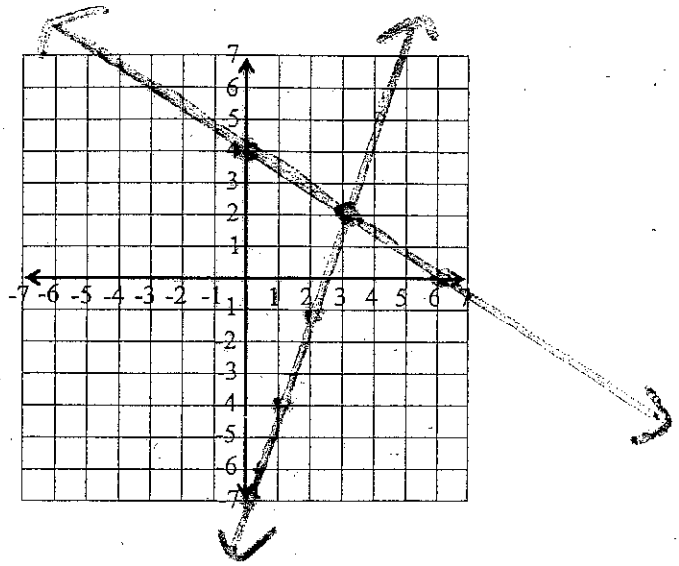
The solution to a system of equations is the point or points that satisfy both equations.

Solve by graphing. $y = mx + b$

EX $y = 3x - 7$ m = 3 y-int (0, -7) -7

$y = -\frac{2}{3}x + 4$ m = $-\frac{2}{3}$ y-int (0, 4) 4

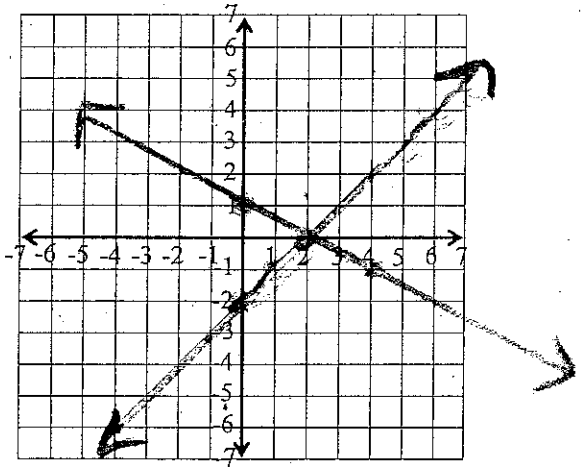
Solution: (3, 2)



TRY $y = x - 2$ m = 1 y-int (0, -2) -2

$y = -\frac{1}{2}x + 1$ m = $-\frac{1}{2}$ y-int (0, 1) b = 1

Solution: (2, 0)

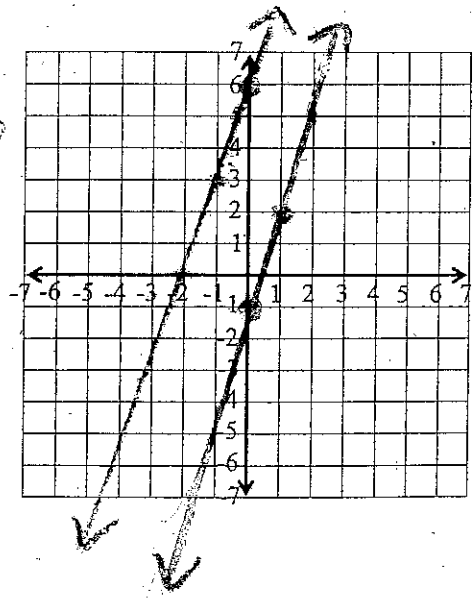


EX $y = 3x - 1$ m = 3 y-int (0, -1) b = -1

$y = 3x + 6$ m = 3 y-int (0, 6) b = 6

$m: \frac{3}{1} = \frac{-3}{-1}$

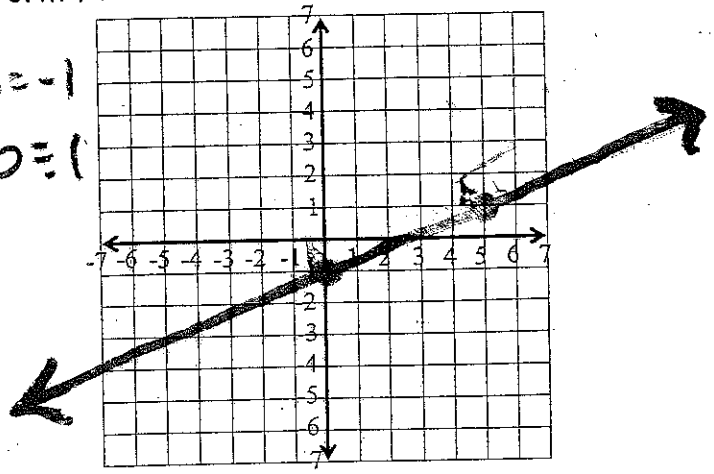
Solution: $\emptyset$ no solution



TRY *** Put equations into slope-intercept form first. Show work.

$y = \frac{2}{5}x - 1$ m = 2/5 y-int (0, -1) b = -1

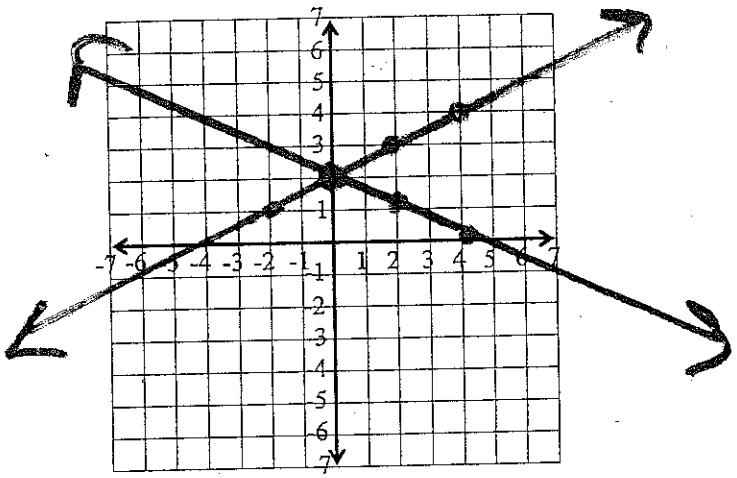
→ 2x = 5y + 5 m = 2/5 y-int (0, 1) b = 1



Solution: ∞ infinitely many points

EX: $y = \frac{1}{2}x + 2$ m = y-int (,)

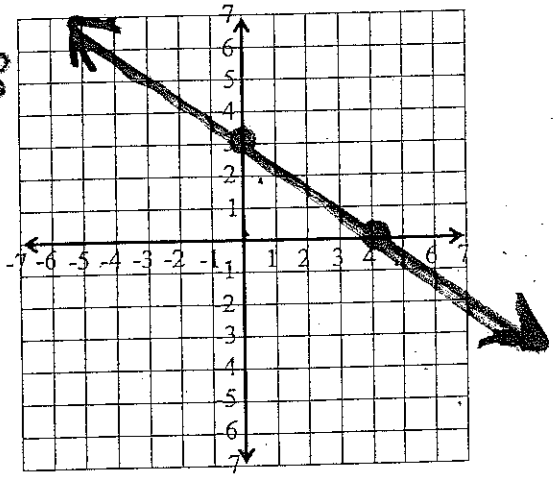
2x + 4y = 8 m = y-int (,)



Solution: (0, 2)

EX: $y = -\frac{3}{4}x + 3$ m = -3/4 y-int (,) b = 3

3x + 4y = 12 m = y-int (0, 3) b = 3



3x + 4y = 12

x-int: x = 4

y-int: y = 3

Solution: ∞ infinitely many

WHAT ARE THE THREE POSSIBILITIES WHEN SOLVING A SYSTEM OF EQUATIONS BY GRAPHING? EXPLAIN.

1.) ∞ infinite (same line)

2.) ∅ no solution parallel

3.) 1 solution intersecting lines