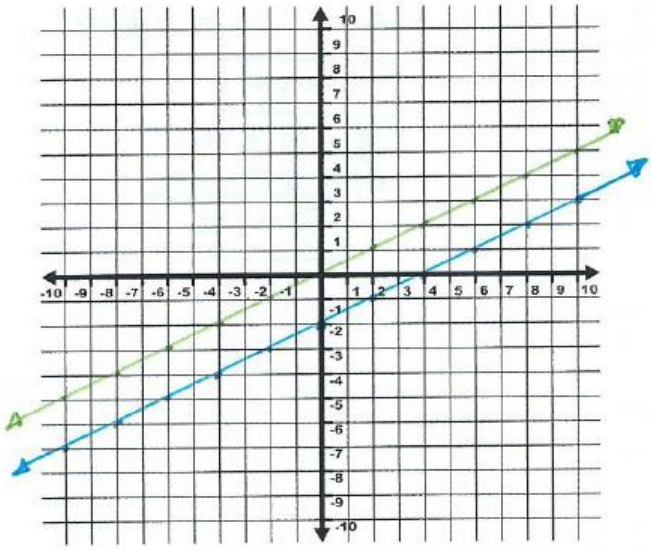
EMA
Solving Systems of Equations

Name: _____
Date: _____ **Period:** ___

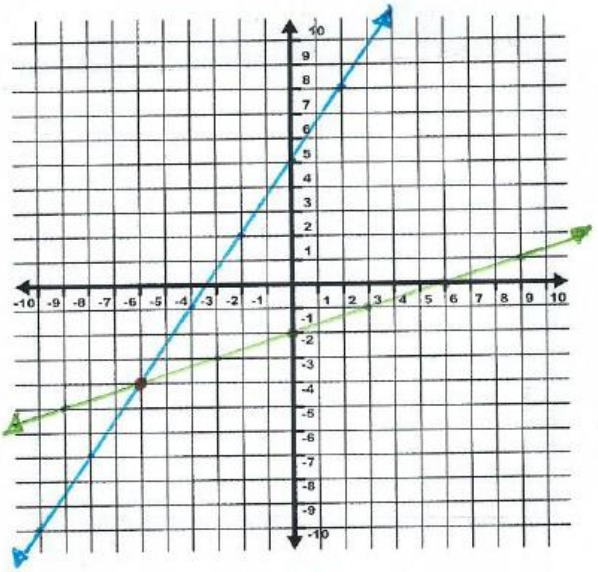
Solve each System by Graphing.

1.) $2x - 8 = 4y \rightarrow y = \frac{1}{2}x - 2$
$2y = x \rightarrow y = \frac{1}{2}x$



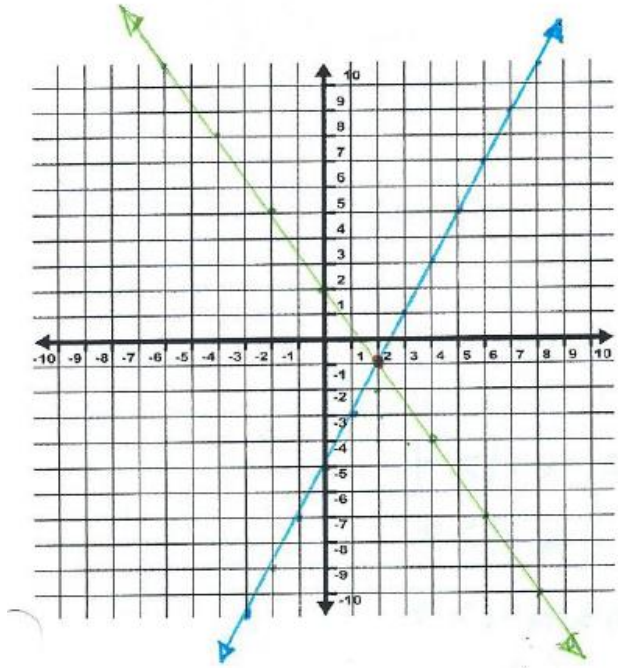
Solution: NO SOLUTION

2.) $2y - 3x = 10 \rightarrow y = \frac{3}{2}x + 5$
$x - 3y - 6 = 0 \rightarrow y = -\frac{1}{3}x - 2$



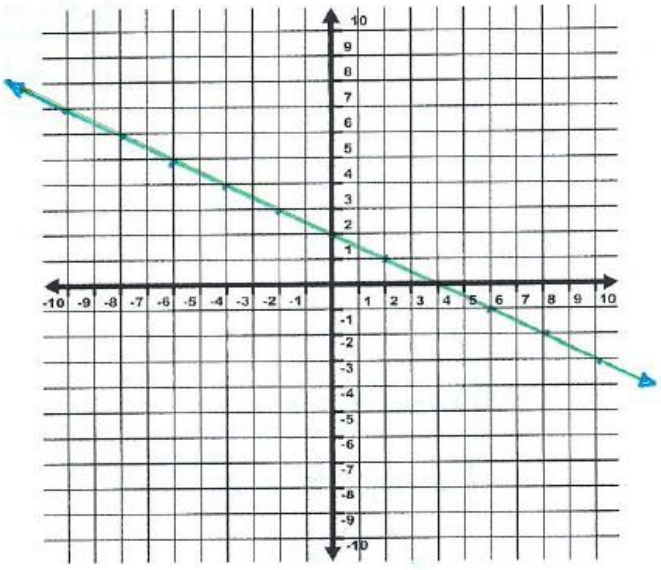
Solution: $(-6, -4)$

3.) $y = 2x - 5$
$3x + 2y = 4 \rightarrow y = -\frac{3}{2}x + 2$



Solution: $(2, -1)$

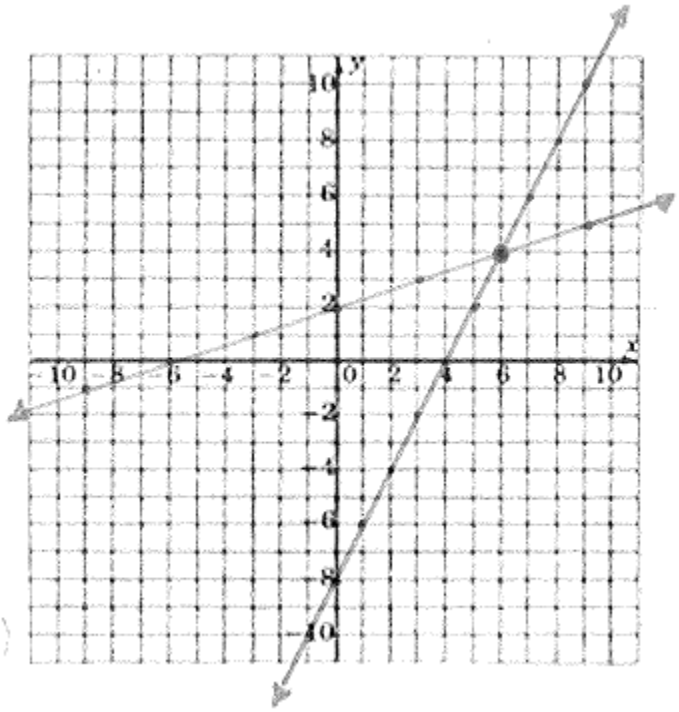
4.) $x + 2y = 4 \rightarrow y = -\frac{1}{2}x + 2$
$2x + 4y = 8 \rightarrow y = -\frac{1}{2}x + 2$



Solution: INFINITELY MANY SOLUTIONS

5.) $-x + 3y = 6$ → $y = \frac{1}{3}x + 2$

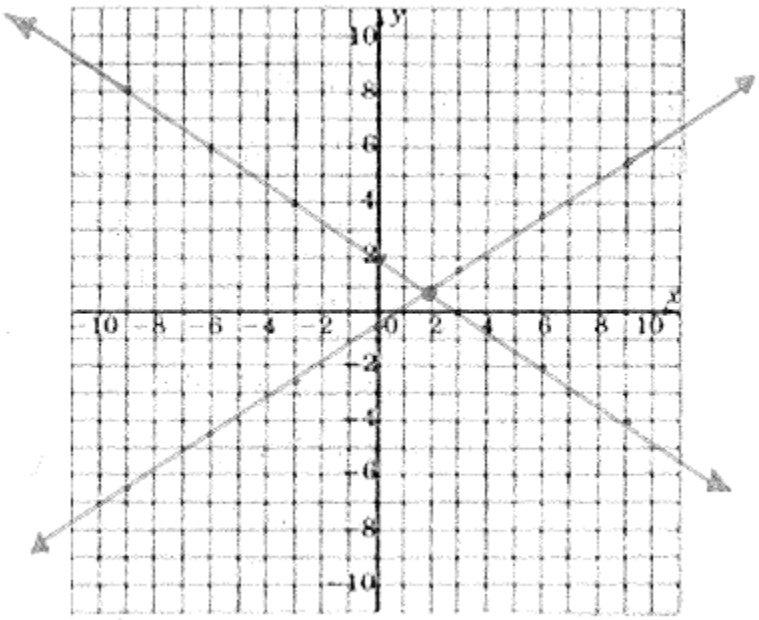
$2x - y = 8$ → $y = 2x - 8$



Solution: $(6, 4)$

6.) $2x + 3y = 6$ → $y = -\frac{2}{3}x + 2$

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



Solution: $(1.875, 0.75)$

Review.

7.) To rent a power saw from Home Depot they charge a flat fee of $25 and $3.50 per hour. Let *h* represent the number of hours rented and *C* represent the total cost of the power saw rental.

a. Write an equation to represent the relationship between the number of hours the saw was rented and the total cost of the rental.

$C = 3.50h + 25$

b. According to your equation, how much would it cost to rent the saw for 24 hours?

$C = 3.50(24) + 25$

$C = 84 + 25$

$\boxed{C = 109}$

c. According to your equation, if a person paid $63.50 for the rental, how long did they rent the saw for?

$63.50 = 3.50h + 25$

$38.50 = 3.50h$

$\boxed{11 = h}$