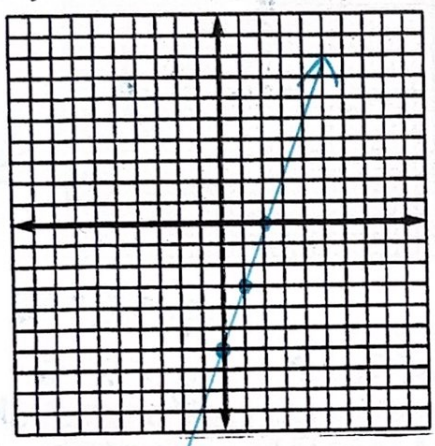
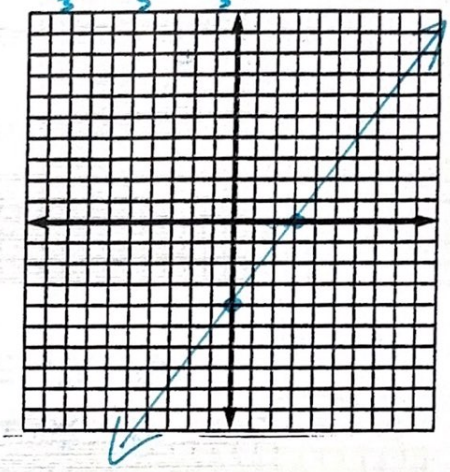
Graphing Lines Worksheet

Rewrite into $y=mx+b$ + graph.

1. $y = 3x - 6$



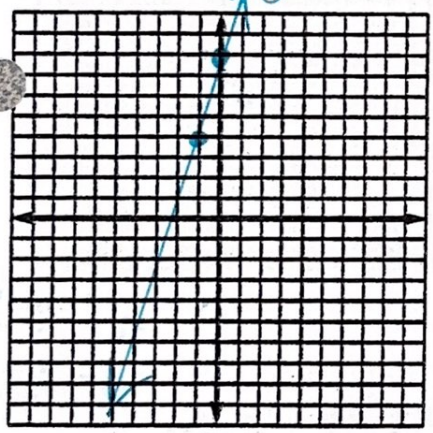
2. $3y = 4x - 12$ → $y = \frac{4}{3}x - 4$



3. $y - 4x = 8$ → $y = 4x + 8$

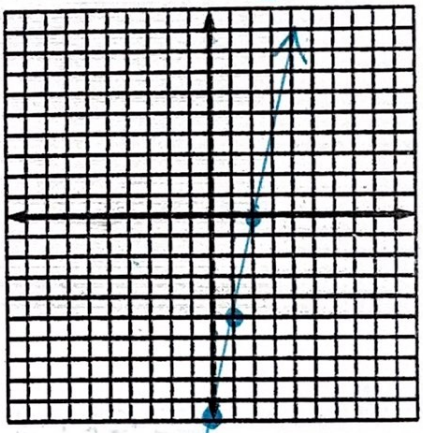
$\frac{4}{1}$ rise / run

$\frac{-4}{-1}$ same

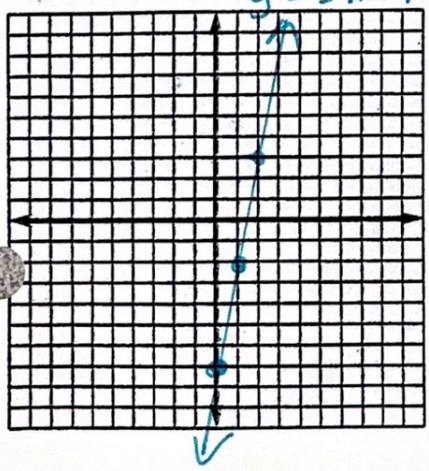


4. $5x + y = -10$ → $y = -5x - 10$

$\frac{-5}{1}$ or $\frac{5}{-1}$

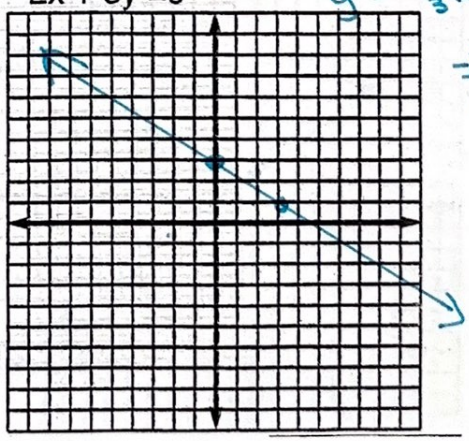


5. $5x - y = 7$ → $-y = -5x + 7$ → $y = 5x - 7$



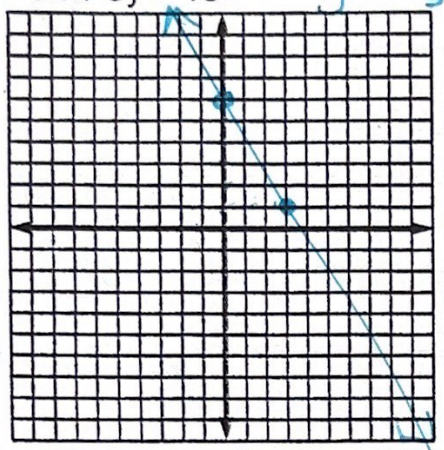
6. $2x + 3y = 9$ → $\frac{3y}{3} = -\frac{2}{3}x + \frac{9}{3}$ → $y = -\frac{2}{3}x + 3$

$\frac{-2}{3}$ down / right



$\frac{3y}{3} = \frac{-5x}{3} + \frac{18}{3}$

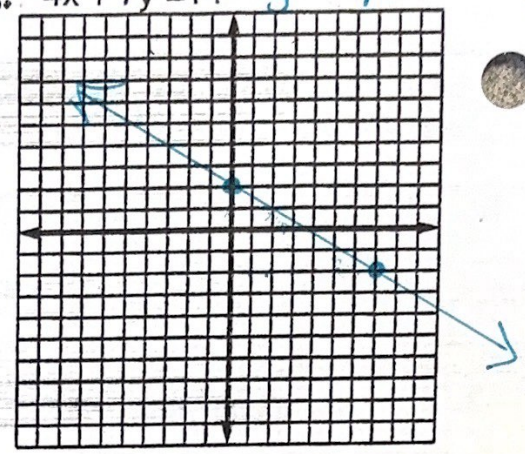
7. $5x + 3y = 18$ $y = -\frac{5}{3}x + 6$



$\frac{-4y}{-4} = \frac{-3x}{-4} - \frac{12}{-4}$

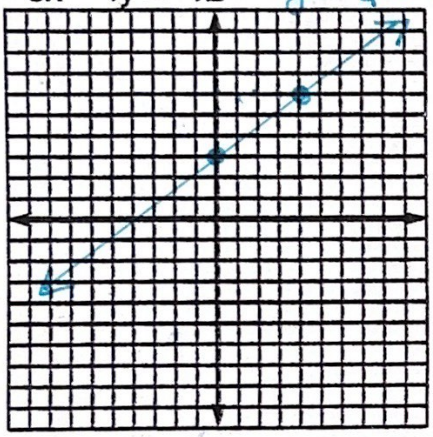
$\frac{7y}{7} = \frac{-4x}{7} + \frac{14}{7}$

8. $4x + 7y = 14$ $y = -\frac{4}{7}x + 2$

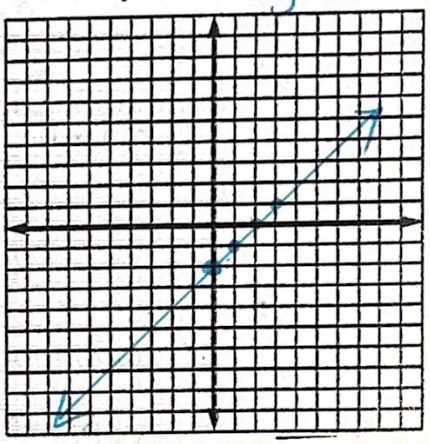


$\frac{-6y}{-6} = \frac{-6x}{-6} + \frac{12}{-6}$

9. $3x - 4y = -12$ $y = \frac{3}{4}x + 3$



10. $6x - 6y = 12$ $y = x - 2$



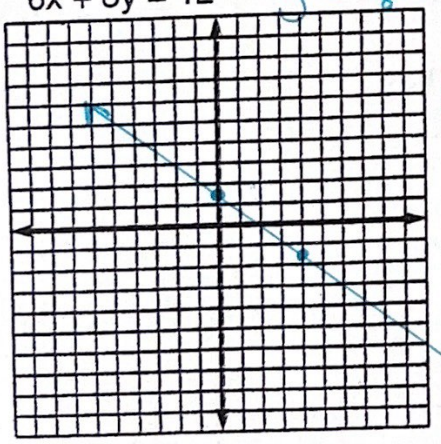
slope $\frac{1}{1}$

$\frac{-6y}{-6} = \frac{-4x}{-6} + \frac{6}{-6}$

$y = \frac{2}{3}x - 1$

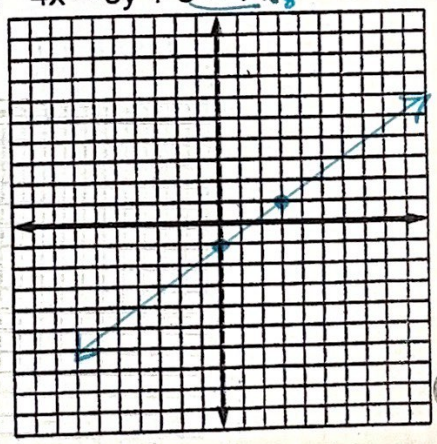
$\frac{8y}{8} = \frac{-6x}{8} + \frac{12}{8}$

11. $6x + 8y = 12$ $y = -\frac{6}{8}x + \frac{12}{8}$



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

12. $4x - 6y + 8 = 14$ -8

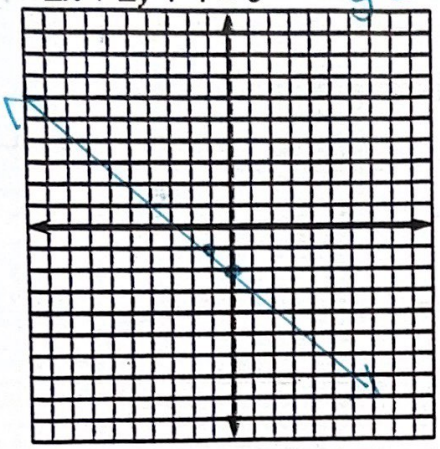


13. $2x + 2y + 4 = 0$

$2y = -2x - 4$

$y = -x - 2$

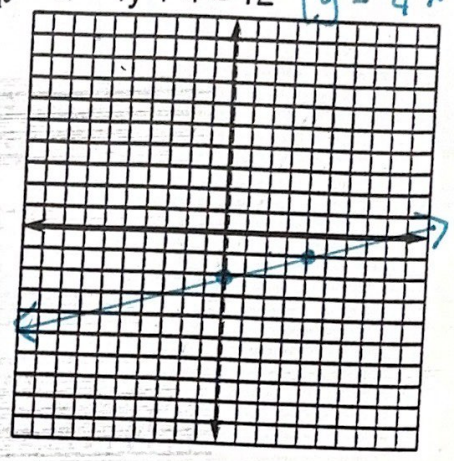
slope $= \frac{-1}{1}$



14. $x - 4y + 4 = 12$

$\frac{-4y}{-4} = \frac{-x}{-4} + \frac{8}{-4}$

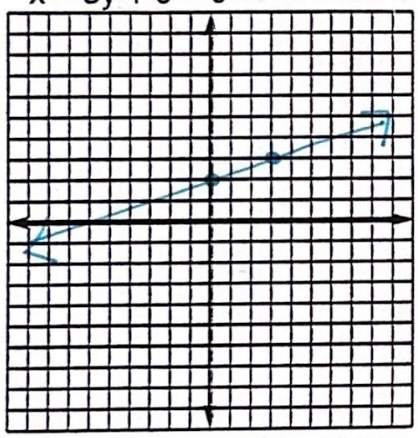
$y = \frac{1}{4}x - 2$



15. $x - 3y + 6 = 0$

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

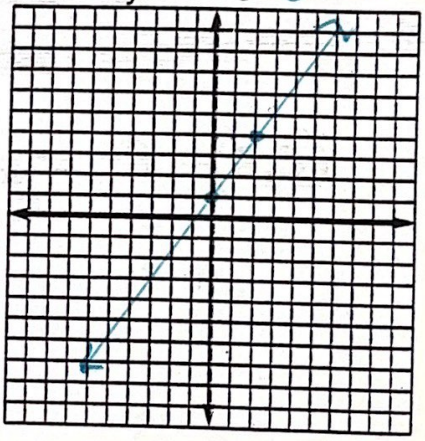
$y = \frac{1}{3}x + 2$



16. $6x - 4y + 4 = 0$

$\frac{-4y}{-4} = \frac{-6x}{-4} - \frac{4}{-4}$

$y = \frac{3}{2}x + 1$



B) Find x- and y-intercepts & graph.

1. $x + 5y = 10$

$0 + 5y = 10$

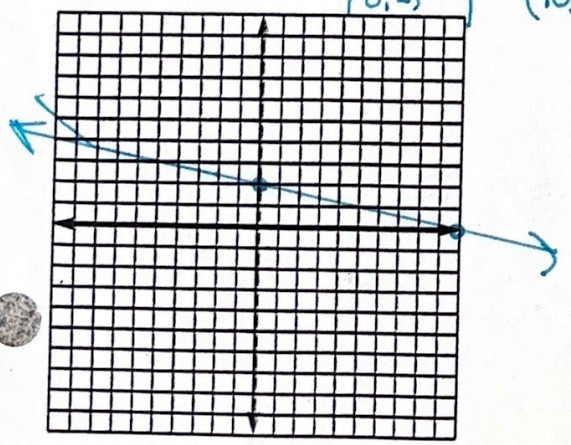
$y = 2$

(0, 2)

$x + 5(0) = 10$

$x = 10$

(10, 0)



2. $3x - 6y = 12$ (0, -2)

$3(0) - 6y = 12$

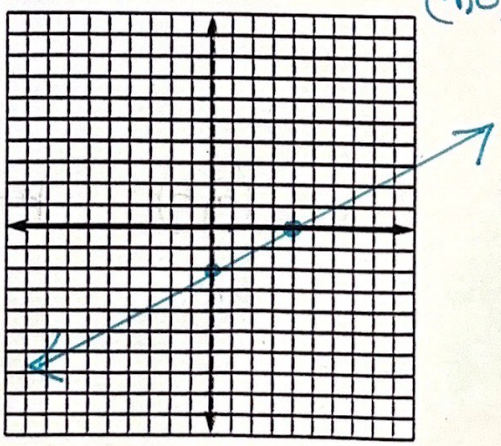
$y = -2$

$3x - 6(0) = 12$

$3x = 12$

$x = 4$

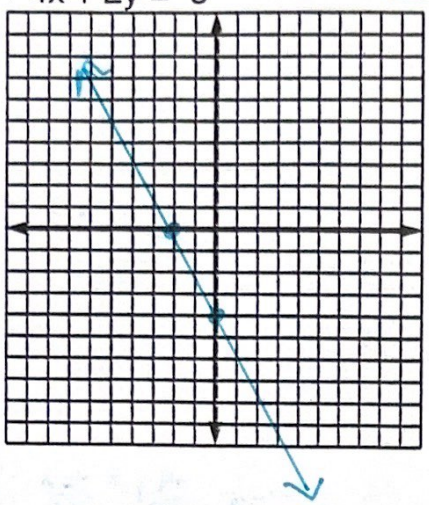
(4, 0)



3. $4x + 2y = -8$

$4(0) + 2y = -8$, $y = -4$

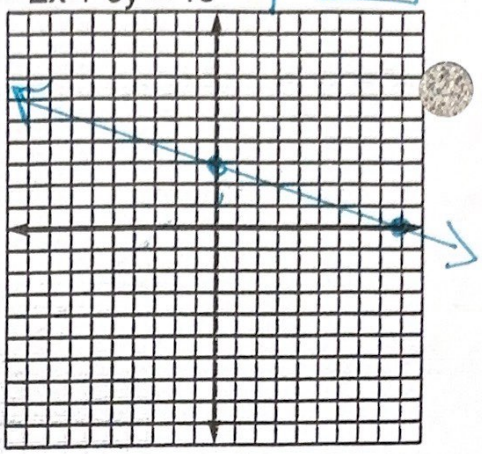
$4x + 2(0) = -8$, $4x = -8$, $x = -2$



4. $2x + 6y = 18$

$2(0) + 6y = 18$, $y = 3$

$2x + 6(0) = 18$, $2x = 18$, $x = 9$



c) Determine whether the given ordered pair is a solution to the following equation:

1.) $3x - 5y = -9$ $(2,3)$

yes

2) $y = -\frac{1}{3}x + 4$ $(0,4)$

yes

3) $3y = 5 - 2x$ $(1,-1)$

no

4) $\frac{1}{3}x - \frac{1}{4}y = 4$ $(6,8)$

No

5) $x = 4$ $(4,2)$

yes

5) $y = -1$ $(-1,3)$

No