

Name: **KEY**

Graphing Practice – Both Forms

What is the slope of the line that goes through the following points.

1. (-3, 5) and (2, 7)

$$\frac{7-5}{2-(-3)} = \boxed{\frac{2}{5}}$$

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

2. (-7, 3) and (1, -7)

$$\frac{-7-3}{1-(-7)} = \frac{-10}{8} = \boxed{-\frac{5}{4}}$$

3. (4, 2) and (6, 2)

$$\frac{2-2}{6-4} = \frac{0}{2} = \boxed{0}$$

4. (-1, 0) and (8, -4)

$$\frac{-4-0}{8-(-1)} = \boxed{-\frac{4}{9}}$$

5. (-2, 6) and (-2, 13)

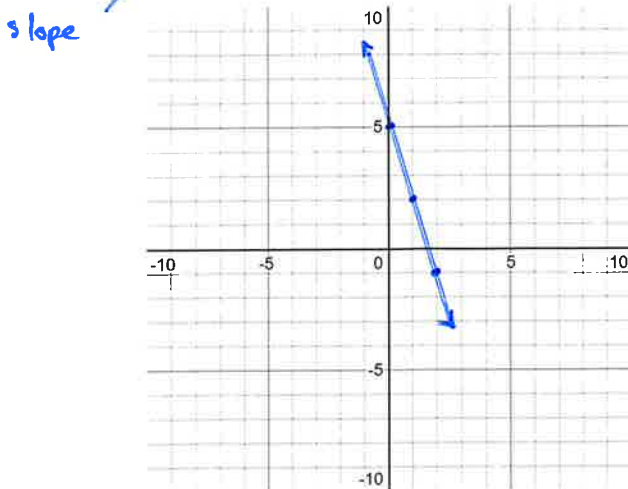
$$\frac{13-6}{-2-(-2)} = \frac{7}{0} \leftarrow \boxed{\text{undefined}}$$

6. (a, b) and (c, d)

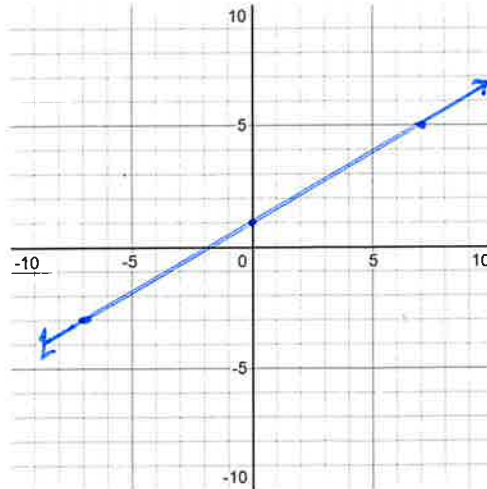
$$\frac{d-b}{c-a}$$

Graph the following equations

7. $y = -3x + 5$ ← y-int

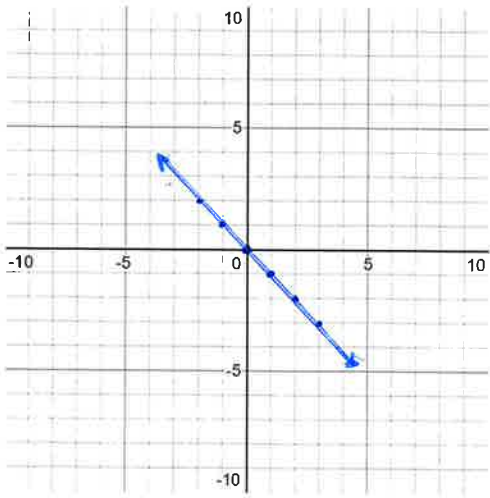


8. $y = \frac{4}{7}x + 1$ ← slope Rise/Ron

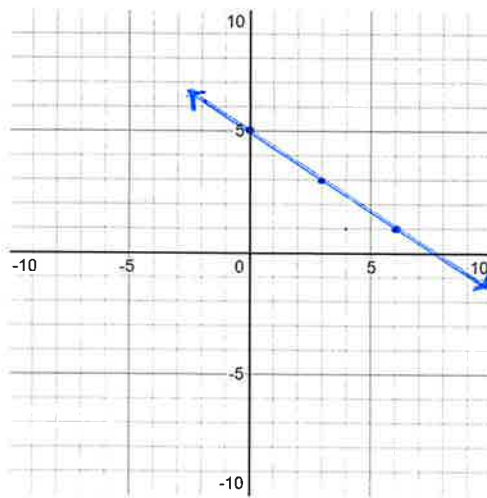


Foundations and Pre-Calculus 10

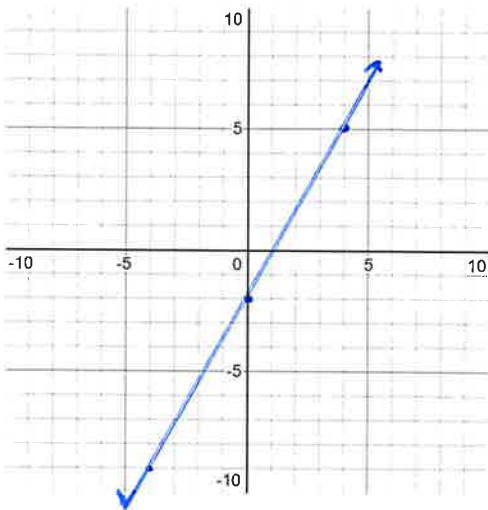
9. $y = -x$ slope $-\frac{1}{1}$



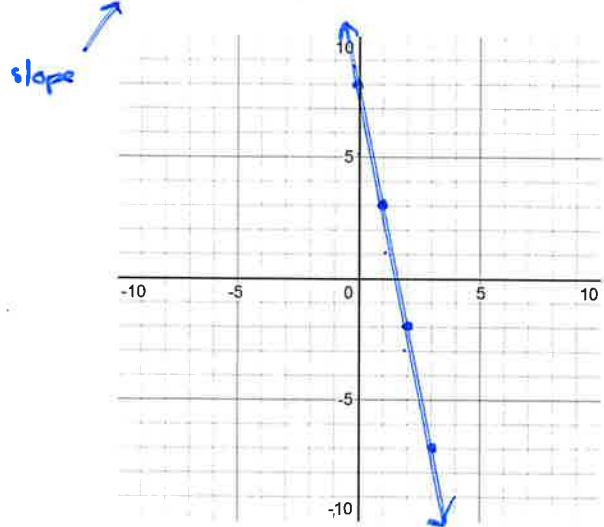
10. $y = 5 - \frac{2}{3}x \rightarrow y = -\frac{2}{3}x + 5$



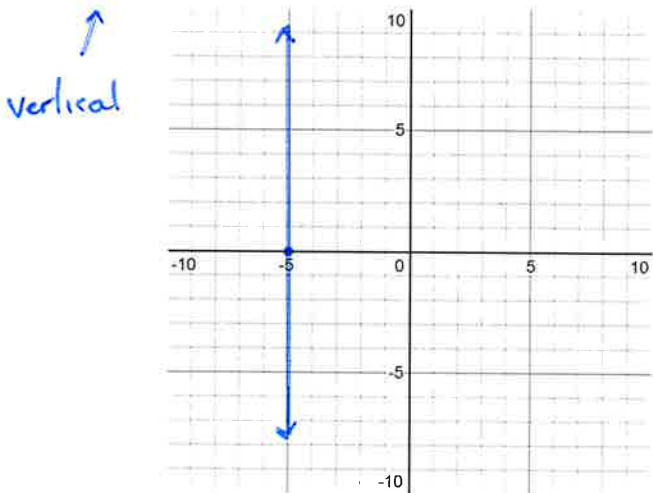
11. $y = \frac{7}{4}x - 2$



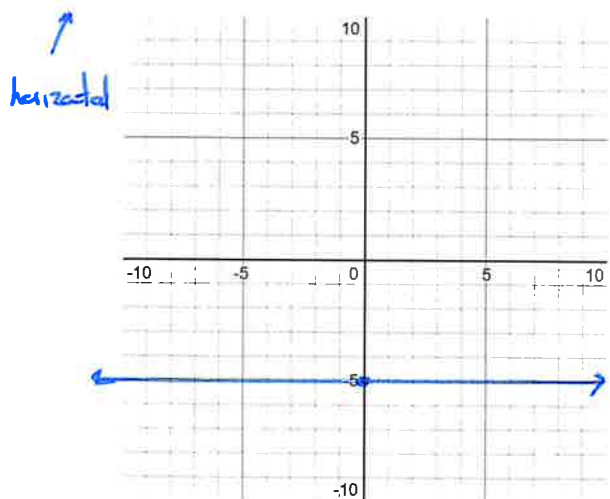
12. $y = -5x + 8$ ← y-int



13. $x = -5$



14. $y = -5$



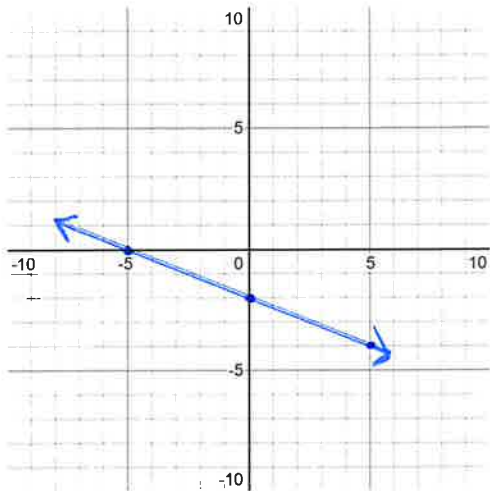
15. $2x + 5y = -10$

$2(0) + 5y = -10$
 $5y = -10$
 $y = -2$

x	y
0	-2
-5	0
5	-4

$2x + 5(0) = -10$
 $2x = -10$
 $x = -5$

$2(5) + 5y = -10$
 $5y = -20$ $y = -4$



16. $-3x + 4y = -24$

$-3(0) + 4y = -24 \rightarrow 4y = -24$
 $y = -6$

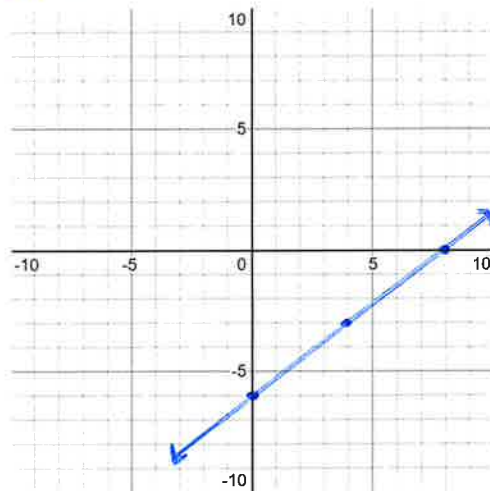
x	y
0	-6
8	0
4	-3

$-3x + 4(0) = -24$
 $-3x = -24$
 $x = 8$

$-3(4) + 4y = -24$

Pick $x = 4$

$4y = -24 + 12$
 $4y = -12$
 $y = -3$

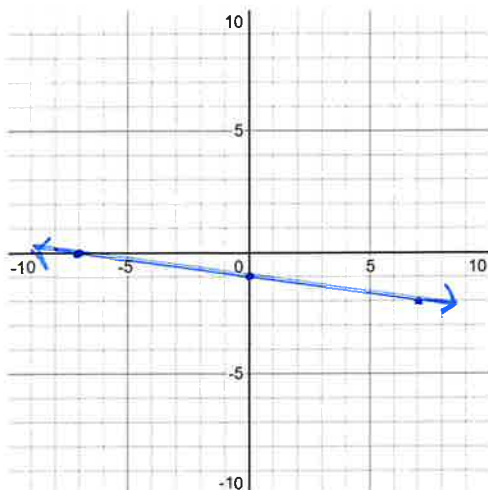


17. $x + 7y = -7$

$0 + 7y = -7$ $x + 7(0) = -7$
 $7y = -7$ $x = -7$
 $y = -1$

x	y
0	-1
-7	0
7	-2

$7 + 7y = -7$
 $7y = -14$
 $y = -2$



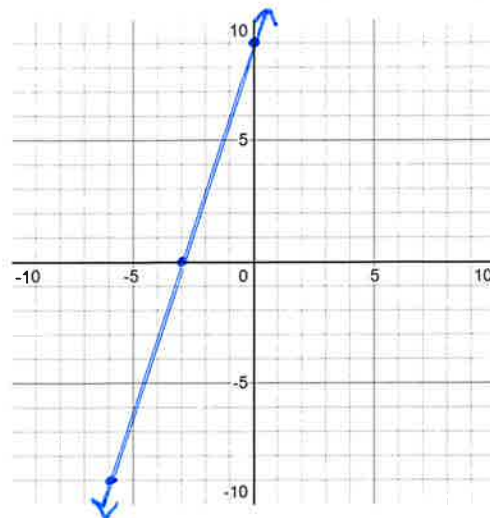
18. $-3x + y = 9$

$-3(0) + y = 9$ $-3x + 0 = 9$
 $y = 9$ $-3x = 9$
 $x = -3$

x	y
0	9
-3	0
-6	

$-3(-6) + y = 9$

$-3(-6) + y = 9 \rightarrow 18 + y = 9$
 $y = -9$



19. $\left(-\frac{x}{4} - \frac{y}{3} = -1\right)$ ^{x LCD: 12}

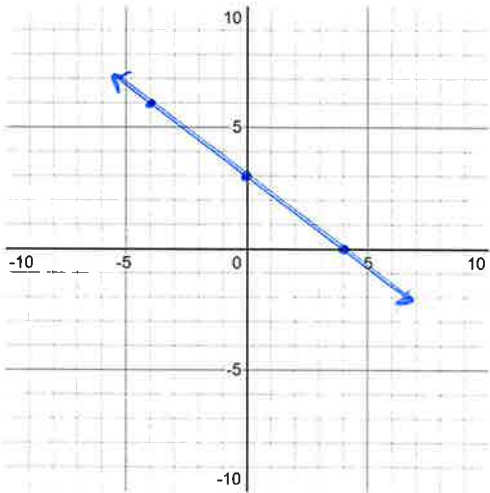
$-3x - 4y = -12$

$-3(-4) - 4y = -12$

$+12 - 4y = -12$

$-4y = -24 \quad y = 6$

x	y
0	3
4	0
-4	6



20. $\left(\frac{x}{2} - \frac{y}{3} = -1\right)$ ^{LCD: 6}

$3x - 2y = -6$

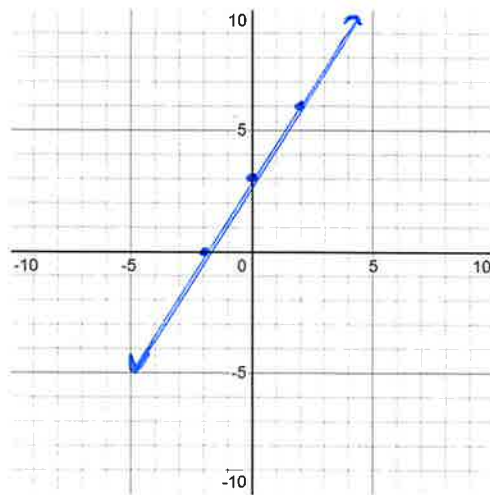
$3(2) - 2y = -6$

$6 - 2y = -6$

$-2y = -12$

$y = +6$

x	y
0	3
-2	0
2	+6



21. $-x - y = -5$

$-0 - y = -5$

$-y = -5$

$y = 5$

$-x - 0 = -5$

$-x = -5$

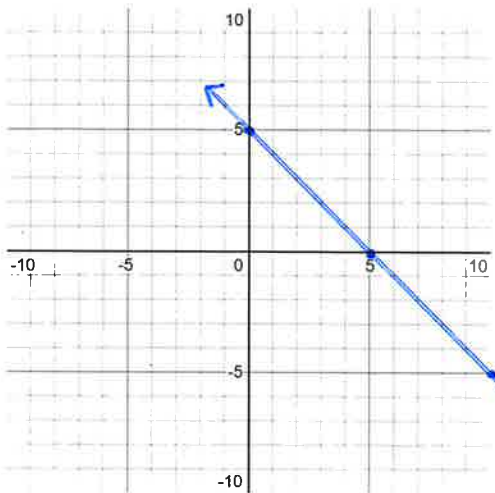
$x = 5$

x	y
0	5
5	0
10	-5

$-10 - y = -5$

$-y = 5$

$y = -5$

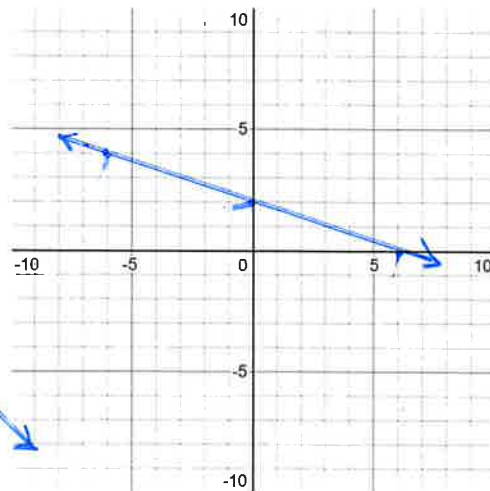


22. $\frac{x}{3} + y = 2$

$\left(\frac{x}{3} + y = 2\right) \cdot 3$

$x + 3y = 6$

x	y
0	2
6	0
-6	4



Convert the following from Standard Form to Slope-Intercept Form

23. $-3x + 4y = 8$

$+3x \quad +3x$

$$\frac{4y}{4} = \frac{3x+8}{4}$$

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

24. $7x - 3y = 21$

$-7x \quad -7x$

$$\frac{-3y}{-3} = \frac{-7x+21}{-3}$$

$$y = \frac{7}{3}x - 7$$

25. $-6x - 5y = -2$

$+6x \quad +6x$

$$\frac{-5y}{-5} = \frac{6x-2}{-5}$$

$$y = -\frac{6}{5}x + \frac{2}{5}$$

26. $4x + 9y = -12$

$-4x \quad -4x$

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

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

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

EXTRA WORK SPACE

