Section 4.3 Exercises Part B

1. Take the Slope Monster a couple of times.

Fill out the table for each of the following:

2. $2x - 5y = 11$

x	y
5	
-4	
	3
	0
	7

3. $y = \frac{7}{2}x+6$

x	y
2	
0	
-1	
	0
	4

Graph the following lines, and label x and y intercepts.

4. $4x - 2y = 10$

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

6. $y = 5x$

Find the slope between each pair of points.

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

8. (9,1) (-7,6)

9. (5,-1) (-3,-8)

10. (-2,9) (-2,3)

11. (-5,2) (5,6)

12. (19,1) (6,1)

13. Explain the difference between a slope of zero and an undefined slope.

Graph the following lines giving one point and the slope.

14. $-3x + 4y = 10$

15. $y = 2x - 7$

16. $y = \frac{2}{5}x - 4$

17. $y = 17$

18. $y = -\frac{3}{7}x - 2$

19. $2x - 6y = 12$

Write the equations of the lines with the slopes and points:

Ex.

Write an equation of the line that has slope m = $\frac{4}{7}$, and goes through the point (2,1). Put the answer in Slope-Intercept Form.

From the slope m = $\frac{4}{7}$, I know that the equation must look like:

$y = \frac{4}{7}x + b$ Put the point in to see what b is.

$1 = \frac{4}{7}(2) + b$

$1 - \frac{8}{7} = b$

$-\frac{1}{7} = b$

Thus the answer is $y = \frac{4}{7}x - \frac{1}{7}$ (or $4x - 7y = 1$ if written in Standard Form).

20. Write an equation of the line that has slope m= -3, and goes through the point (-4,6).

21. Write an equation of the line that has slope m=$\frac{5}{8}$, and goes through the point (3,6).

22. Write an equation of the line that has slope m=$-\frac{2}{3}$, and goes through the point (1,-3).

23. Write an equation of the line that has slope m=$-\frac{4}{5}$, and goes through the point (5,-3).

24. Write an equation of the line that has slope m= 2, and goes through the point (0,5).

25. Write an equation of the line that has slope m=$-\frac{1}{7}$, and goes through the point (-4,7).

Answers:

1. Correct with key.

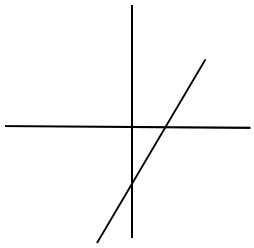
2.

x	y
5	$-\frac{1}{5}$
-4	$-\frac{19}{5}$
13	3
$\frac{11}{2}$	0
23	7

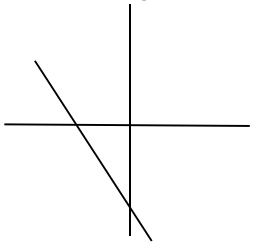
3.

x	y
2	13
0	6
-1	$\frac{5}{2}$
$-\frac{12}{7}$	0
$-\frac{4}{7}$	4

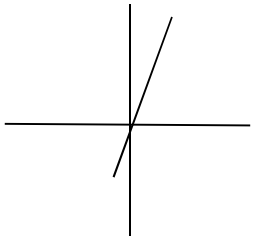
4. (0,-5) $(\frac{5}{2},0)$



5. (0,-6) $(-\frac{18}{5},0)$



6. (0,0) only intercept



7. m = $\frac{5}{4}$

8. m = $-\frac{5}{16}$

9. m = $\frac{7}{8}$

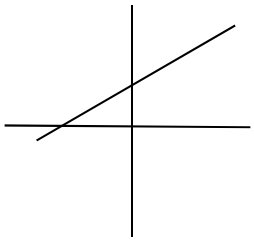
10. m = undefined

11. m = $\frac{2}{5}$

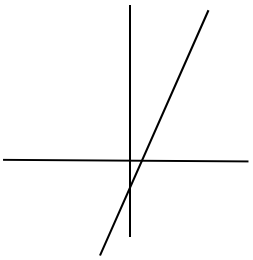
12. m = 0

13. Undefined is vertical
0 is horizontal

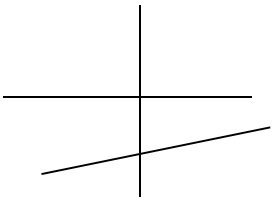
14. $(0,\frac{5}{2})$ m = $\frac{3}{4}$



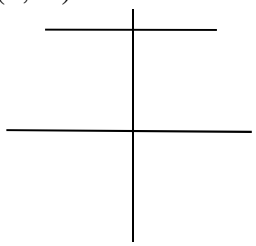
15. (0,-7) m = 2



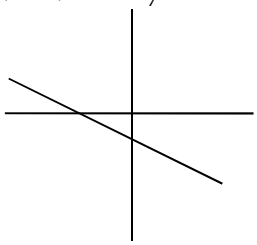
16. (0,-4) m = $\frac{2}{5}$



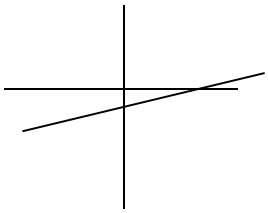
17. (0,17) m = 0



18. (0,-2) m = $-\frac{3}{7}$



19. (6,0) m = $\frac{1}{3}$



20. $y = -3x - 6$ **or** $3x + y = -6$

21. $y = \frac{5}{8}x + \frac{33}{8}$ **or** $5x - 8y = -33$

22. $y = -\frac{2}{3}x - \frac{7}{3}$ **or** $2x + 3y = -7$

23. $y = -\frac{4}{5}x + 1$ **or** $4x + 5y = 5$

24. $y = 2x + 5$ **or** $2x - y = -5$

25. $y = -\frac{1}{7}x + \frac{45}{7}$ **or** $x + 7y = 45$