Guided Notes: Slope & Slope-Intercept Form.

Date_____ Period____

The Slope of a Line

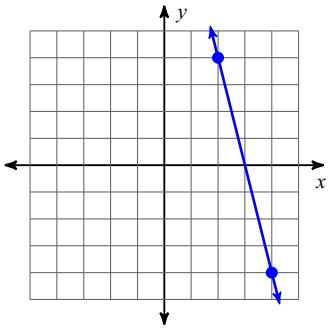
1) The slope of a line indicates the rate of change of a linear function as the independent variable (x) increases by one.

   It is typically described as the vertical change divided by the horizontal change.

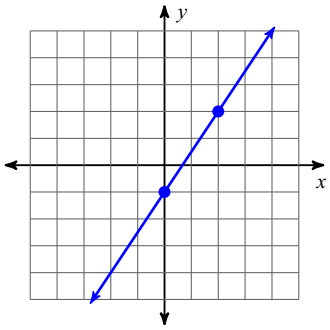
   This is often known as $\frac{RISE}{RUN}$.

Find the slope of each line.

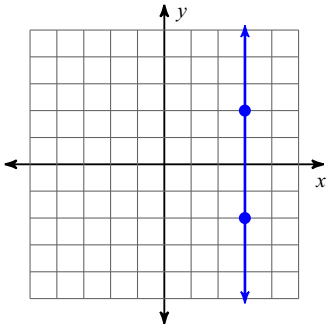
2)



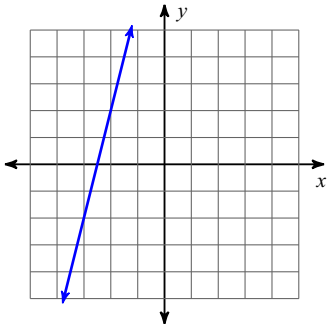
3)



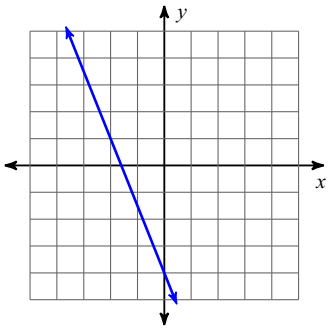
4)



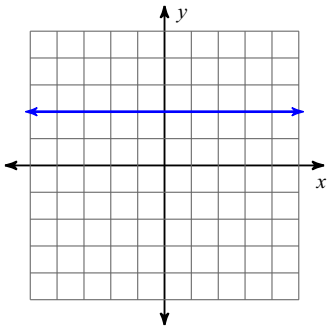
5)



6)



7)



Finding Slope with Two Points

8) We can also find the slope (we use the variable *m* to represent slope) of a line if we are given any two points on the line.

   If the two points are (x_1, y_1) and (x_2, y_2), then the slope is found using the formula

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

Find the slope of the line through each pair of points.

9) $(19, 5), (-19, -1)$

10) $(8, -14), (15, -14)$

11) $(14, 3), (14, 19)$

12) $(-16, 6), (7, -13)$

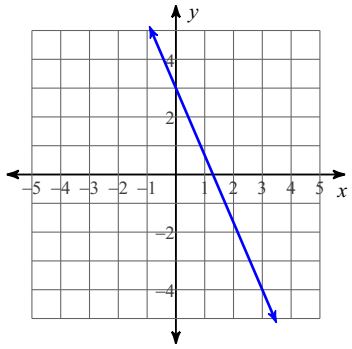
Equations of a Line in Slope-Intercept Form

13) We can write the equation of a line just by knowing its y-intercept, and its slope. We call this "Slope-Intercept Form."

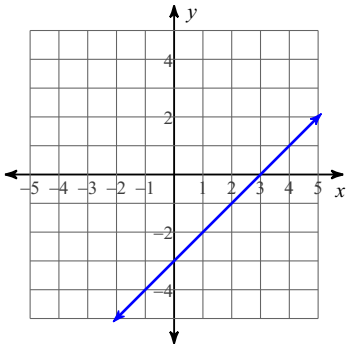
Slope-Intercept form is $y = mx + b$ where the m represents the slope of our line, and the b represents the y-intercept of the line.

Write the slope-intercept form of the equation of each line.

14)



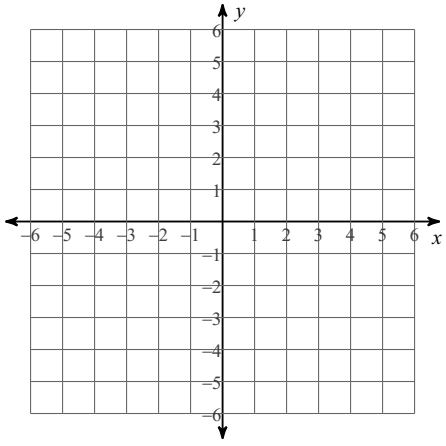
15)



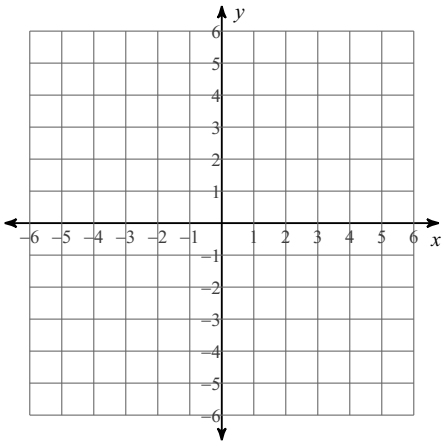
16) For extra practice, go back and try to write the equations for problems 2-7. (Hint, one of them is not a function, and can't be written in slope-intercept form.)

Sketch the graph of each line.

17) $y = -2x - 1$



18) $y = \frac{7}{4}x - 4$



19) HOMEWORK:
Pg 298 #8-29; Pg 312 #7-12 (Graph Each) and 22-27

Guided Notes: Slope & Slope-Intercept Form.

Date_____ Period____

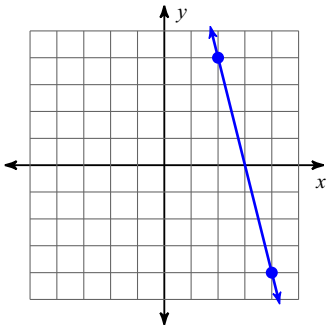
The Slope of a Line

1) The slope of a line indicates the rate of change of a linear function as the independent variable (x) increases by one.

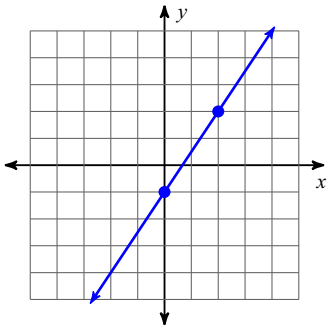
It is typically described as the vertical change divided by the horizontal change.

This is often known as $\frac{RISE}{RUN}$.

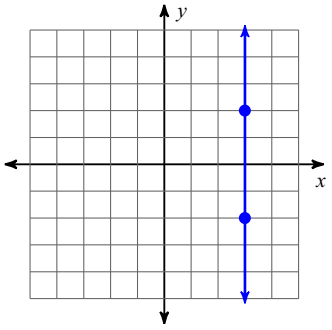
Find the slope of each line.

2) 

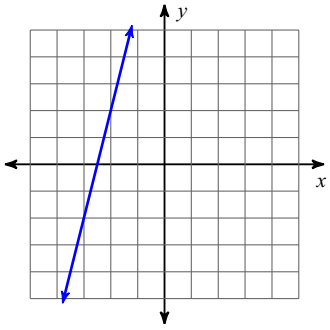
–4

3) 

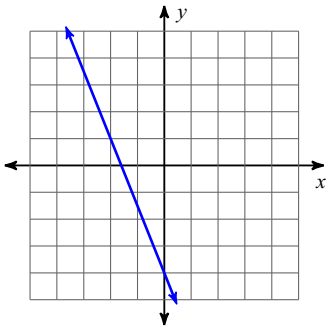
$\frac{3}{2}$

4) 

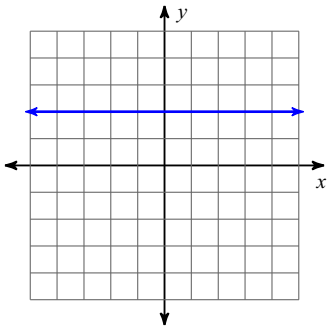
Undefined

5) 

4

6) 

$-\frac{5}{2}$

7) 

0

Finding Slope with Two Points

8) We can also find the slope (we use the variable *m* to represent slope) of a line if we are given any two points on the line.

If the two points are (x_1, y_1) and (x_2, y_2), then the slope is found using the formula

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

Find the slope of the line through each pair of points.

9) $(19, 5), (-19, -1)$ $\frac{3}{19}$

10) $(8, -14), (15, -14)$ 0

11) $(14, 3), (14, 19)$ Undefined

12) $(-16, 6), (7, -13)$ $-\frac{19}{23}$

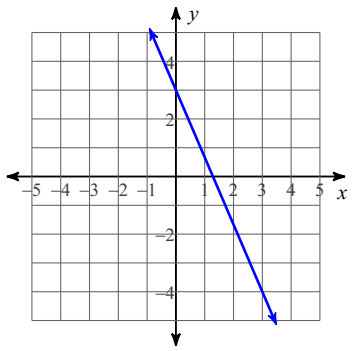
Equations of a Line in Slope-Intercept Form

13) We can write the equation of a line just by knowing its y-intercept, and its slope. We call this "Slope-Intercept Form."

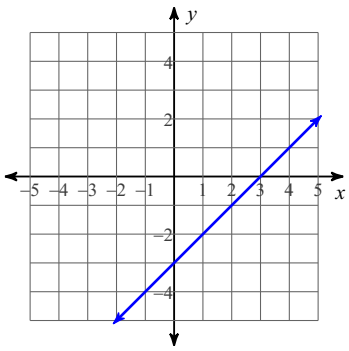
Slope-Intercept form is $y = mx + b$ where the m represents the slope of our line, and the b represents the y-intercept of the line.

Write the slope-intercept form of the equation of each line.

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



15)

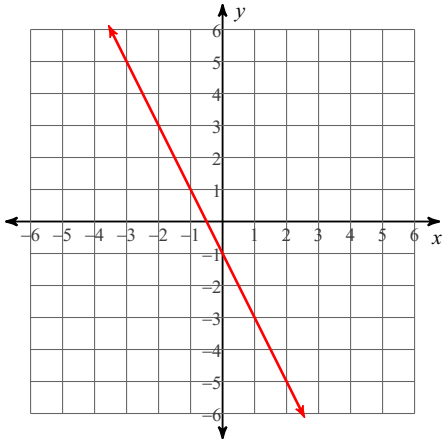


$y = x - 3$

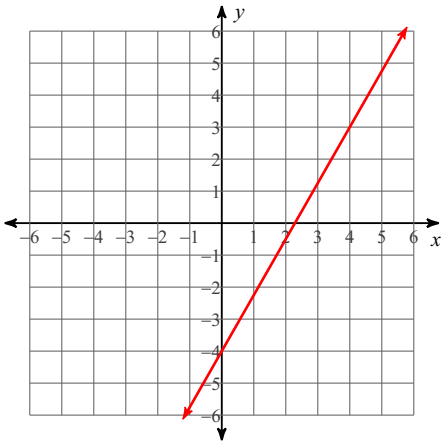
16) For extra practice, go back and try to write the equations for problems 2-7. (Hint, one of them is not a function, and can't be written in slope-intercept form.)

Sketch the graph of each line.

17) $y = -2x - 1$



18) $y = \frac{7}{4}x - 4$



19) HOMEWORK:
Pg 298 #8-29; Pg 312 #7-12 (Graph Each) and 22-27