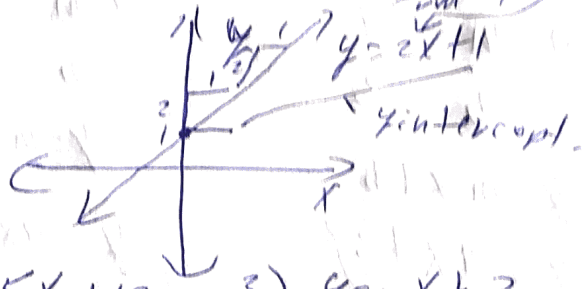


Name \_\_\_\_\_  
Date Oct 8, 20

period \_\_\_\_\_ notes:

Find the slope and y-intercept of the graph <sup>rise 2</sup> <sup>run 1</sup> slope of each equation.

$$y = \overset{\text{slope}}{m}x + \underset{\text{y-intercept}}{b}$$



1)  $y = 3x + 5$

$$\begin{cases} m = 3 \\ b = 5 \end{cases}$$

2)  $y = -5x + 13$

$$\begin{cases} m = -5 \\ b = 13 \end{cases}$$

3)  $y = -x + 2$

$$\begin{cases} m = -1 \\ b = 2 \end{cases}$$

4)  $y = -11x + 6$

$$m = -11$$

$$b = 6$$

5)  $y = -5$

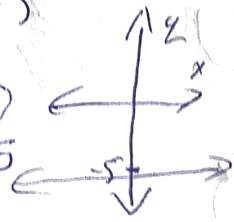
$$m = 0$$

$$b = -5$$

6)  $y = \frac{1}{2}x + 6$

$$m = \frac{1}{2}$$

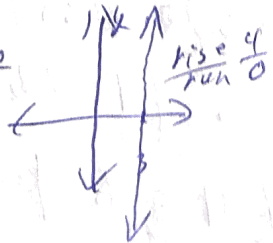
$$b = 6$$



7)  $x = 3$

$$m = \text{undefined}$$

$$b = \text{no}$$



8)  $y = 2x - 5$

$$b = -5$$

$$m = 2$$

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

$$b = 2$$

$$m = \frac{1}{3}$$

Write an equation of a line with the given slope  $m$  and y-intercept  $b$ .

10)  $m = -1$   
 $b = 3$

$$y = mx + b$$

$$y = -1x + 3$$

11)  $m = 4$   
 $b = 2$   
 $y = mx + b$

$$y = 4x + 2$$

12)  $m = -5$

$b = 8$

$$y = mx + b$$

$$y = -5x + 8$$

13)  $m = 0.25$   
 $b = 6$

$$y = mx + b$$

$$y = 0.25x + 6$$

14)  $b = -11$   
 $m = 0$

$$y = mx + b$$

$$y = 0x - 11$$

$$y = -11 \rightarrow$$

15)  $b = \frac{3}{8}$   
 $m = 1$

$$y = mx + b$$

$$y = 1x + \frac{3}{8}$$

19)  $(x_1, y_1) (x_2, y_2)$   
 $(3, 5) (0, 4)$

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

$$m = \frac{4 - 5}{0 - 3} = \frac{-1}{-3} = \frac{1}{3}$$

$$y = mx + b$$

$$y = \frac{1}{3}x + 4$$

$$y = mx + b$$

$$(5) = \frac{1}{3}(3) + b$$

$$5 = \frac{1}{-1} + b$$

$$4 = b$$

20)  $(2, 6)$   $(-4, -2)$

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

$$m = \frac{-2 - 6}{-4 - 2} = \frac{-8}{-6} = \frac{8}{6} = \frac{4}{3}$$

$$y = mx + b$$
$$(6) = \frac{4}{3}(2) + b$$

$$6 = \frac{8}{3} + b$$

$$\begin{array}{r} \frac{6}{1} \frac{18}{3} \\ - \frac{8}{3} \\ \hline \frac{10}{3} \end{array}$$

$$y = mx + b$$

$$y = \frac{4}{3}x + \frac{10}{3}$$

21)  $(-1, 3)$   $(-3, 1)$

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

$$m = \frac{1 - 3}{-3 - (-1)} = \frac{-2}{-2} = 1$$

$$y = mx + b$$

$$y = 1x + 4$$

$$y = mx + b$$

$$(3) = 1(-1) + b$$

$$3 = -1 + b$$

$$4 = b$$

$$22) (-7, 5) (3, 0)$$

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

$$m = \frac{0 - 5}{3 - (-7)} = \frac{-5}{10} \quad \left( -\frac{1}{2} \right)$$

$$y = mx + b$$

$$(0) = -\frac{1}{2}(3) + b$$

$$0 = \frac{-3}{2} + b$$

$$\frac{3}{2} = b$$

$$y = mx + b$$

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

$$23) (10, 2) (-2, -2)$$

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

$$m = \frac{-2 - 2}{-2 - 10} = \frac{-4}{-12} \quad \left( \frac{1}{3} \right)$$

$$y = mx + b$$

$$(2) = \frac{1}{3}(10) + b$$

$$2 = \frac{10}{3} + b$$

$$-\frac{10}{3} = b$$

$$-\frac{4}{3} = b$$

$$y = mx + b$$

$$y = \frac{1}{3}x - \frac{4}{3}$$

$$\begin{array}{r} 2 \times \frac{6}{3} \\ \frac{12}{3} \\ -\frac{10}{3} \\ \hline \frac{2}{3} \end{array}$$

24)  $(x_1, y_1) (x_2, y_2)$   
 $(0, -1) (5, 6)$

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

$$m = \frac{6 - (-1)}{5 - 0} = \frac{7}{5}$$

$$y = mx + b$$

$$(-1) = \frac{7}{5}(0) + b$$

$$-1 = 0 + b$$

$$-1 = b$$

$$y = mx + b$$

$$y = \frac{7}{5}x - 1$$

25)  $(3, 2) (-1, 6)$

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

$$m = \frac{6 - 2}{-1 - 3} = \frac{4}{-4} = -1$$

$$y = mx + b$$

$$(2) = -1(3) + b$$

$$2 = \frac{-3}{+3} + b$$

$$5 = b$$

$$y = mx + b$$

$$y = -1x + 5$$