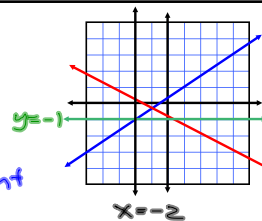


Algebra II

3-1 Slope

$$\text{Slope} - m = \frac{\text{rise}}{\text{run}} = \frac{y_2 - y_1}{x_2 - x_1}$$



Positive Slope - uphill,
left to right

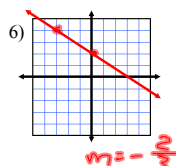
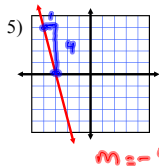
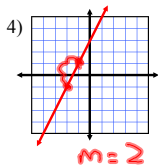
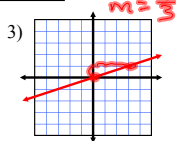
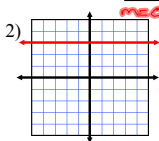
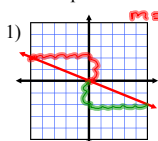
Negative Slope - downhill,
left to right

Zero Slope - horizontal, $y =$ lines

No Slope - vertical, $x =$ lines

Oral Exercises pg 115

Give the slope of each line shown.



Find the slope of the line containing the given points. (pg 116)
If the line has no slope, write, "vertical".

1) $(3, 1), (5, 5)$

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{5 - 1}{5 - 3} = \frac{4}{2} = 2$$

Slope / Intercept Form of a Line -

$$y = mx + b$$

$m =$ slope

$b =$ y-intercept

b point where the
line crosses the
y-axis

\Rightarrow starting point

Find the slope of each line. (pg 116)

13) $x + y = 7$

$$y = -x + 7$$

$$m = -1$$

19) $x = 3y + 2$

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

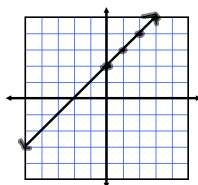
$$y = \frac{1}{3}x - \frac{2}{3}$$

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

Graph the line through point P having slope m .
~~Find the coordinates of two other points on the line.~~

25) $P(0,2), m=1$

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



Find the value of k so that the given line has slope m .

39) $kx - 3y = 7, m = 2$

$$kx - 3y = 7$$

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

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

$$m = \frac{k}{3} = 2$$

$$k = 6$$

Assignment:

Pg. 116
2-46 even, 33, 35
(8 Graphs)

Need: 1 Sheet of Graph Paper