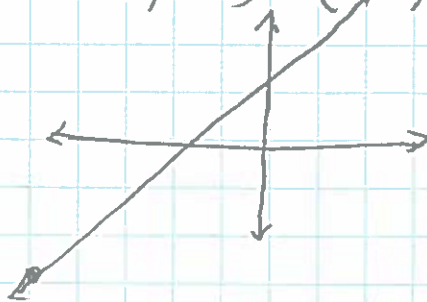


# A# 18 Algebra pg 239 #1-18

1) The slope of a nonvertical line is the ratio of the vertical change to the horizontal change between any two points on a line.

2)  $(-5, -3)$   $(-2, 4)$

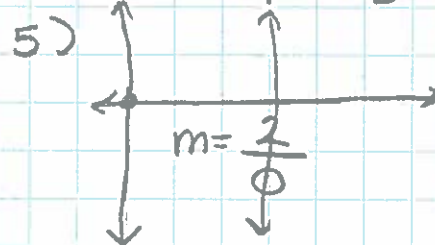
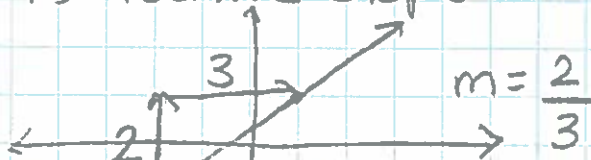


This increases, therefore the slope is positive!

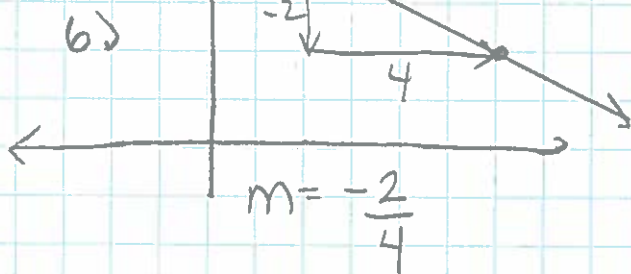
3)  $m = \frac{6-3}{5-2} = \frac{3}{3} = 1$   
 $(x_1, y_1)$   $(x_2, y_2)$

$\frac{y_2 - y_1}{x_1 - x_2}$  } wrong order

4) Positive slope



undefined = m  
vertical line



7)  $m = \frac{12-6}{0-3}$   
 $m = \frac{6}{-3}$   
 $m = -2$   
 error analysis  
 (6,3)(12,0)  
 should be chg y!  
 chg x.  
 they did the opposite!

$m = -1/2$ , negative slope  
decreasing line

8)  $(-2, -1)$   $(4, 5)$

9)  $(-3, -2)$   $(-3, 6)$

$m = \frac{\Delta y}{\Delta x}$

$m = 1$

$m = \frac{5 - (-1)}{4 - (-2)}$

increasing line

$m = \frac{5+1}{4+2}$

$m = \frac{6}{6}$

$m = \frac{\Delta y}{\Delta x}$

$m = \frac{6 - (-2)}{-3 - (-3)}$

$m = \frac{8}{0}$

$m = \text{undefined}$

Vertical line

10.) (5, -3) (-5, -3)

$$m = \frac{\Delta y}{\Delta x}$$

$$m = \frac{-3 - (-3)}{-5 - 5}$$

$$m = \frac{0}{-10}$$

$$m = 0$$

horizontal line

11.) (1, 3) (3, -2)

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

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

$$m = \frac{5}{-2}$$

decreasing line

12.) (-3, 4) (4, 1)

$$m = \frac{\Delta y}{\Delta x}$$

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

$$m = \frac{4 + (-1)}{-3 + (-4)}$$

$$m = \frac{3}{-7}$$

decreasing line

13.) (1, -3) (7, 3)

$$m = \frac{\Delta y}{\Delta x}$$

$$m = \frac{3 - (-3)}{7 - 1}$$

$$m = \frac{3 - (-3)}{7 - 1}$$

$$m = 1$$

increasing line

$$m = \frac{3 + 3}{6}$$

14.) (0, 0) (0, -6)

$$m = \frac{\Delta y}{\Delta x}$$

$$m = \frac{-6 - 0}{0 - 0}$$

$$m = \frac{-6}{0}$$

vertical line

$$m = \text{undefined}$$

15.) (-9, 1) (1, 1)

$$m = \frac{\Delta y}{\Delta x}$$

$$m = 0$$

horizontal line

$$m = \frac{1 - 1}{1 - (-9)}$$

$$m = \frac{0}{10}$$

17.) (-2, -3) (8, -3)  $m = 0$

$$m = \frac{\Delta y}{\Delta x}$$

$$m = \frac{-3 - (-3)}{8 - (-2)}$$

$$m = \frac{-3 + 3}{8 + 2}$$

$$m = \frac{0}{10}$$

$$m = 0$$

horizontal line

18.) (7, -9) (-13, -6)  $m = -\frac{3}{20}$

$$m = \frac{\Delta y}{\Delta x}$$

$$m = \frac{-9 - (-6)}{7 - (-13)}$$

$$m = \frac{-9 + 6}{7 + 13}$$

$$m = \frac{-3}{20}$$

decreasing line

16.) (-10, -2) (-8, 8)

$$m = \frac{\Delta y}{\Delta x}$$

$$m = \frac{8 - (-2)}{-8 - (-10)}$$

$$m = \frac{8 + 2}{-8 + 10}$$

$$m = \frac{10}{2}$$

$$m = 5$$

increasing line