3-4 D1 Notes

Wednesday, February 7, 2024 1:53 PM

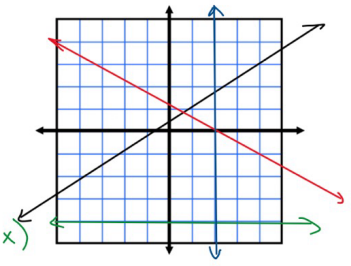
Slope - $m = \frac{\text{change in } y}{\text{change in } x} = \frac{\Delta y}{\Delta x} = \frac{\text{rise}}{\text{run}} = \frac{y_2 - y_1}{x_2 - x_1}$

Positive Slope - uphill, Left to Right

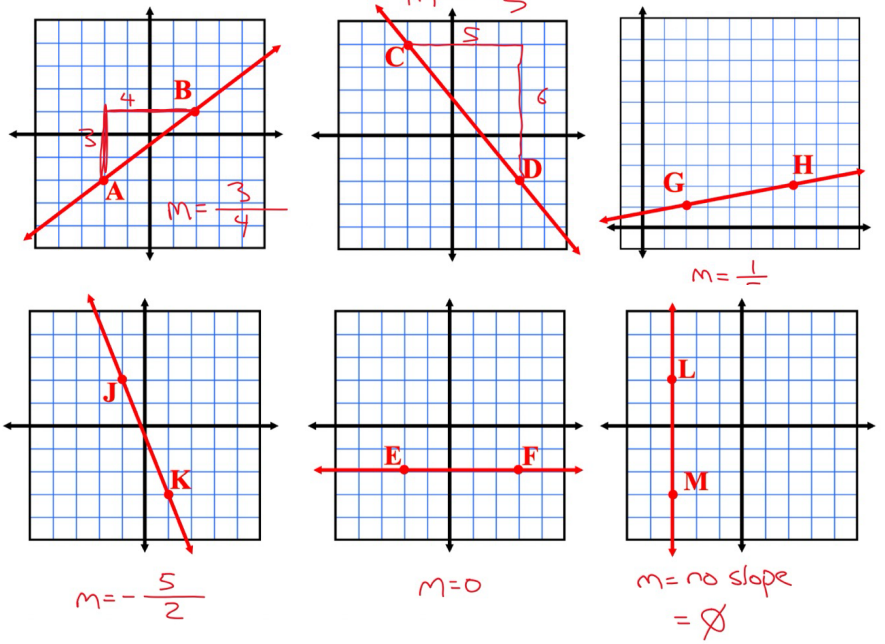
Negative Slope - downhill, Left to Right

Zero Slope - horizontal (y= lines, no x)

No Slope - Vertical (x= lines, no y)



Find the slope of each line shown.



Find the slope of the line through the given points.

1) $(8, 4)$ $(6, 5)$ (x_1, y_1 x_2, y_2)

$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{5-4}{6-8}$

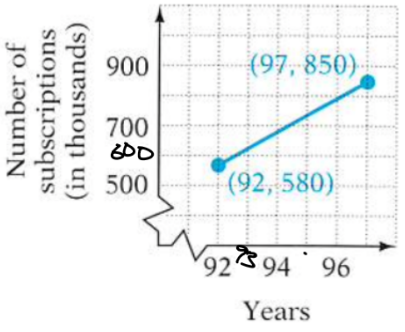
$= \frac{1}{-2} = \boxed{-\frac{1}{2}}$

11) $(0, -3)$ $(3, -1)$ (x_2 y_2)

$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-1-(-3)}{3-0} = \frac{-1+3}{3-0}$

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

20. The graph below shows the number of people subscribing to a sports magazine whose popularity is increasing. Find the slope of the line between the two points shown on the graph. What is the meaning of the slope?



$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{850 - 580}{97 - 92} = \frac{270}{5} = \frac{54}{1}$$

Each year, the subscriptions increase by 54,000.