

Home

Realtor

Algebra ALEKS Topics

Algebra Notes

Algebra Reviews

MAT0028

MAC1105

MGF ALEKS Topics

MGF Reviews

MGF Notes

STA2023

Stats ALEKS Topics

Stats Notes

Stats Reviews

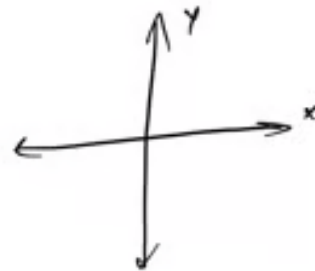
Algebra Notes / Linear Graphing Notes

$$y = mx + b$$

$$m = \text{slope} \quad \text{rate of change} \quad m = \frac{y_2 - y_1}{x_2 - x_1} \quad \begin{matrix} \text{rise} & \text{up/down} \\ \text{run} & \text{right} \end{matrix}$$

$b = \text{y-intercept}$ *starting point* $x = 0$

(x, y) any point on the line



(x_1, y_1) (x_2, y_2) Find the slope.

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{5 - 3}{-4 - 2} = \frac{2}{-6} = \boxed{-\frac{1}{3}} \quad \begin{matrix} \text{down 1} \\ \text{right 3} \end{matrix}$$

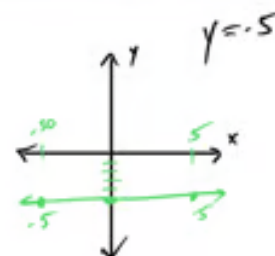
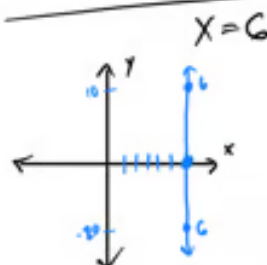
↙
positive slope

↘
negative slope

↔

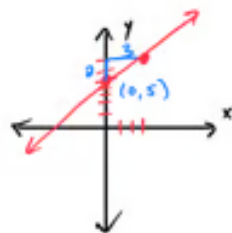
$m = 0$
Horizontal line
 $y = \#$

↕
 $m = \text{undefined}$
Vertical line
 $x = \#$



$$y = \frac{2}{3}x + 5$$

$m = \frac{2}{3}$ $\begin{matrix} \text{up 2} \\ \text{right 3} \end{matrix}$
 $b = 5$ *start here*
 $(0, 5)$



$$y = -4x + 6$$

$m = -4 = \frac{-4}{1} = \begin{matrix} \text{down 4} \\ \text{right 1} \end{matrix}$
 $b = 6$ *start here*
 $(0, 6)$

