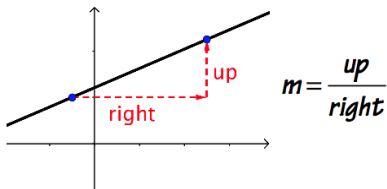


Beginning Algebra

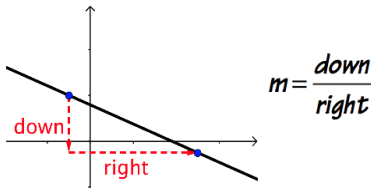
Slopes & Lines

Name: _____

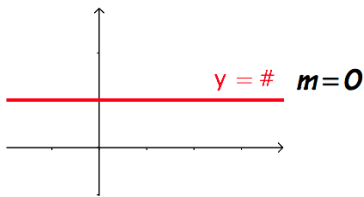
Positive Slope



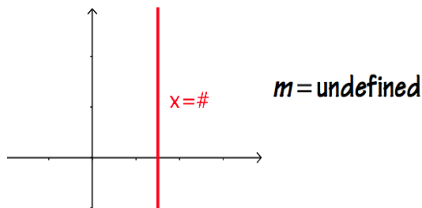
Negative Slope



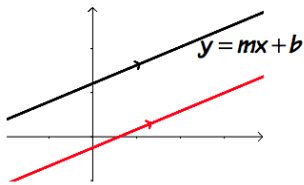
Horizontal Line



Vertical Line

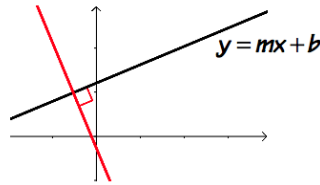


Parallel



$m_{\parallel} = m$ same slope

Perpendicular



$m_{\perp} = \frac{-1}{m}$ opposite sign & reciprocal

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

Point-Slope: $y - y_1 = m(x - x_1)$

Slope-Intercept: $y = mx + b$

Isolate y for Slope

If $Ax + By = C$, then isolate y

$$y = mx + b$$

↑
slope

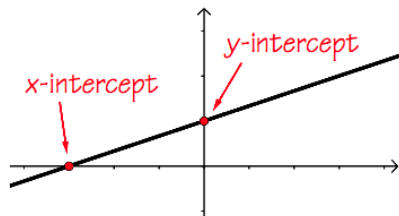
To Write an Equation of a Line

- need (1) Slope m
- (2) Point (x_1, y_1)

use $y - y_1 = m(x - x_1)$
get $y = mx + b$

x-intercept: let $y = 0$, then solve for x

y-intercept: let $x = 0$, then solve for y



Graph Linear Equation

$$y = mx + b$$

step 2

$$m = \frac{\text{go up or down}}{\text{go right}}$$

step 1

y-intercept

Application

rate of change

beginning value

$$y = mx + b$$