Geometry

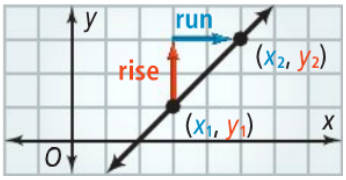
Chapter 3
Section 3-7

Slope Review

Slope Formula:

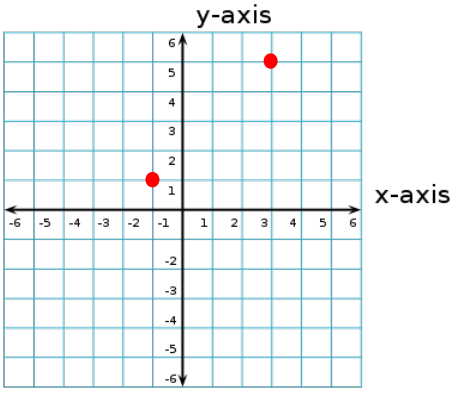
$$\frac{y_2 - y_1}{x_2 - x_1}$$

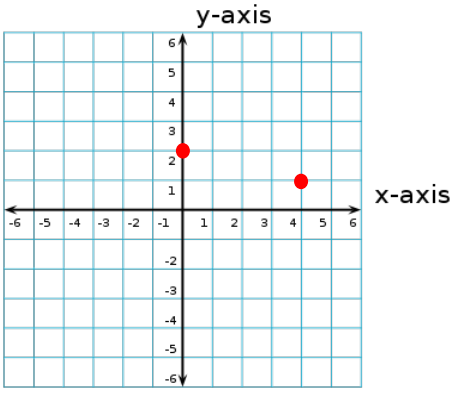
Slope Diagram:



Rise Over Run

Calculating Slope

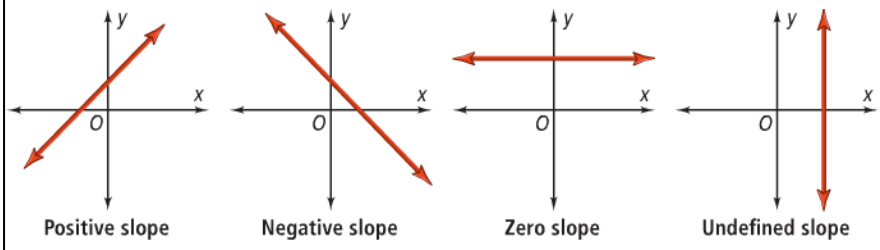




(-1, 1) (3, 5)
(5 - 1) / (3 - (-1))
4/4
1 (up 1 & over 1)

(0, 2) (4, 1)
(1 - 2) / (4 - 0)
(-1) / 4
-1 / 4 (down 1 & over 4)

What Slope Means



$\frac{\text{Positive Rise}}{\text{Positive Run}}$ $\frac{\text{Negative Rise}}{\text{Positive Run}}$ $\frac{\text{0 Rise}}{\text{Any Run}}$ $\frac{\text{Any Rise}}{\text{0 Run}}$

More Formulas

Slope-Intercept Form

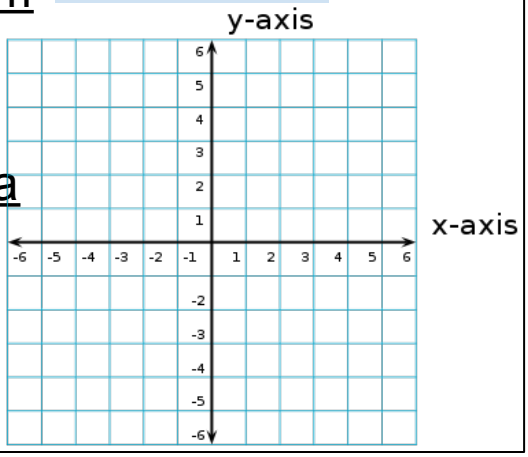
$y = {}^{2}/_{3}x - 2$

- $y = mx + b$

Point-Slope Formula

- $y - y_1 = m(x - x_1)$

$y - 5 = 4(x - 1)$



m is the slope, b is the y intercept: (0, b)

need slope (m) and one point (x_1 , y_1)

Writing Equations

Point: (7, 5) Slope: 8	Point: (5, -10) Slope: 0	Point: (2, 3) Point: (0, 0)
Y-Intercept: 2 Slope: 5	Point: (5, -2) Point: (4, -5)	Point: (7, 1) Point: (7, -3)

Homework

Page 194-195
 # 9-39 (every third), 43, 52-55