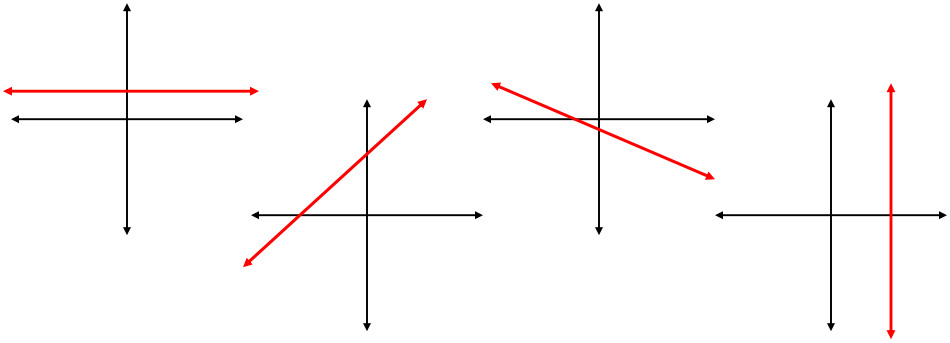
3.5 The Slope of a Line

Need to Know

- The idea of slope
- Slope characteristics
- 3 ways to find slope

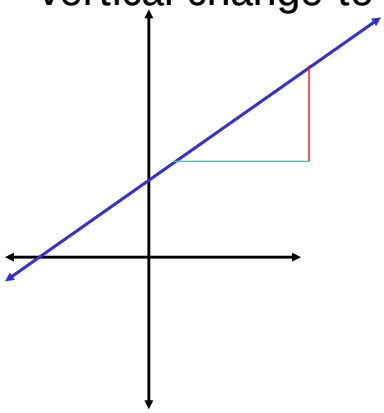
The Idea of Slope

Slope is the measure of the steepness of a line.



The Idea of Slope

We can measure slope by comparing vertical change to horizontal change .



Slope = m

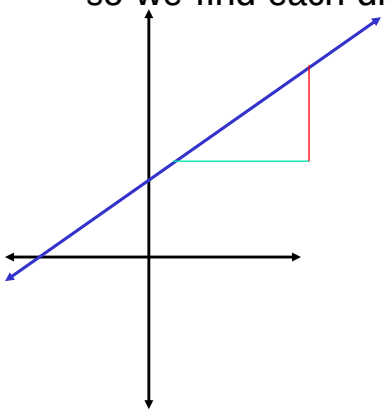
= ratio of change

$$= \frac{\text{change in y}}{\text{change in x}}$$

$$= \frac{\text{rise}}{\text{run}}$$

The Measure of Slope

The ratio of change comes from two distances, so we find each distance by subtraction.



Practice – 3 Ways to Find Slope

Find Slope

1. From a picture

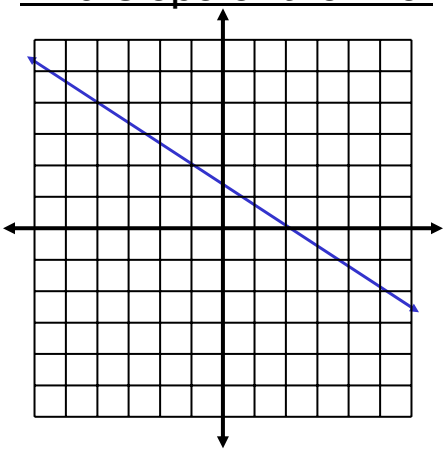
$$\frac{\text{rise}}{\text{run}}$$

2. From the formula

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

3. From an equation

Find Slope of the line.



Practice – 3 Ways to Find Slope

Find Slope

1. From a picture

$$\frac{\text{rise}}{\text{run}}$$

2. From the formula

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

3. From an equation

Find Slope of the line through (-5,1) and (4,-6)

Practice – 3 Ways to Find Slope

Find Slope

1. From a picture

$$\frac{\text{rise}}{\text{run}}$$

2. From the formula

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

3. From an equation

Find Slope of the line through (-2,-3) and (4,-4)

You try it!