Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_

**Chapter 2, Section 2 Notes**

***Finding the Slope of a Line***

**Today’s Learning Goal:** *At the end of today’s lesson, you should be able to find the slope of a line from a graph, from two coordinate points, or from a table.*

Today, you will learn about slope and the various ways you can calculate the **slope** of a line. Recall that **slope** is

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. If a line has a **positive slope**, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. If a line has a **negative slope**, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Part 1: *Calculating Slope from a Graph:***

To find the slope of a line when looking at a graph….

 Step 1: Choose any two points on the line.

 Step 2: Begin at one of the points.

Step 3: Count vertically until you are even with the second point. This is called the \_\_\_\_\_\_\_\_\_\_. If you travel down, the rise will be \_\_\_\_\_\_\_\_\_\_\_. If you travel up, the rise will be \_\_\_\_\_\_\_\_\_\_\_.

Step 4: Count over (horizontally) until you are at the second point. This is called the \_\_\_\_\_\_\_\_\_\_\_\_. If you travel left, the run will be \_\_\_\_\_\_\_\_\_\_\_\_. If you travel right, the run will be \_\_\_\_\_\_\_\_\_\_\_\_\_.

Examples: Find the slope of each line.

 A) B) C)

**Part 2: *Calculating Slope when given Two Coordinate Points:***

**The Slope Formula:**

Examples: Find the slope of the line through the given points.

A) (6, 4) (-1, 3) B) (0. 4) (4, -2) C) (-1, -1) (-2, 5)

**Part 3: *Calculating Slope when given a Table:***

How would you calculate the slope of the line from the table below?

**Part 4: *Horizontal and Vertical Slopes:***

Horizontal and vertical lines have special slopes:

The slope of a horizontal line is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The slope of a vertical line is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Example: **Graph y = -4** Example: **Graph x = 5**

**Part 5: *Story Problems:***

The slope of a ramp from the sidewalk to the street has to be  The height of a ramp is 2.5 inches. What is the horizontal length (in inches) of the ramp?

**Progress Monitoring:** *How do you feel about your level of understanding of finding slope of linear equations?* (Rate yourself from 0 (don’t understand at all) to 10 (doing awesome))

