**Calculating & Interpreting Slope**

The **formula for the slope** between the two points A and B can be found by using the *x* and *y* coordinates of the two points. Call the ordered pair for point A (*x*1,*y*1) and the ordered pair for point B (*x*2,*y*2).

The slope of a line can always be represented as a fraction. For example, if the slope is 5, we can write 5 as the fraction . That means the rise is “up 5” and the run is “right 1”.

1. Plot the given point on the coordinate plane, and then use the slope to find a second point on the line. Connect the points with a straight line.
2. Point (2,0), slope = b. Point (-8,4), slope =

 

Second point:\_\_\_\_\_\_\_\_\_\_\_ Second point:\_\_\_\_\_\_\_\_\_\_\_

1. Plot the given point on the coordinate plane, and then use the slope to find a second point on the line. Connect the points with a straight line
2. Point (-3, -5), slope =  b. Point (-2, 7), slope = 

 

Second point:\_\_\_\_\_\_\_\_\_\_\_ Second point:\_\_\_\_\_\_\_\_\_\_\_

1. Use the **slope formula** to find the slope of the line passing through the given points.

Show your work.

a. (1, 5) & (2, 9) b. (2, 4) & (1, 1)

c. (0, 4) & (-2, 8) d. (8, -8) & (6, 4)

e. (3, -2) & (-7, -2) f. (7, -6) & (2, -3)

g. (-3, -2) & (-1, -7) h. (2, -6) & (5, -1)

Sometimes it is useful to express slope as a **unit rate**. A unit rate has a denominator of 1. An example of a unit rate is $8 per hour: that is the same as . In a distance-time

function, the slope may be , which is also meters per second. As a decimal, it is 1.5 meters per second or .

1. Mr. Peel started 7 meters away from the motion detector, and 2 seconds later, he was 3 meters away from the motion detector. The graph below displays Mr. Peel’s motion. Find the **average rate of change** or **slope** in meters per second.



1. Sara started out with $50 in her piggy bank. Every week she deposited the same amount of money in the bank. After 7 weeks she had $67.50. Find the **average rate of change** or **slope in dollars per week.** (This is a unit rate.)
2. At 4 a.m. the temperature was 38 degrees F. By 11 a.m. the temperature had risen to 60 degrees F. Find the **average rate of change** or **slope in degrees per hour.**