**Notes:** Introduction to Slope

Today’s Objective: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Slope: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**FORMULA=**

A line has a \_\_\_\_\_\_\_\_\_\_\_\_\_ slope, if it is going uphill from left to right.

A line has a \_\_\_\_\_\_\_\_\_\_\_\_\_ slope, if it is going downhill from left to right.

**DETERMINE THE SLOPE OF A LINE**

When given a graph, \_\_\_\_\_\_\_ over \_\_\_\_\_\_ may be easier to use.

Start at the lower point, move up and over.

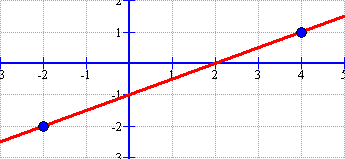
Rise = \_\_\_\_

Run

Start at the upper point, move down and over

Rise = \_\_\_\_

Run



**FINDING SLOPE GIVEN TWO POINTS:**

Find the slope of the line that passes through the points (-2, -2) and (4, 1).

**When given points, it is easier to use the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**

y2 is the y coordinate of the \_\_\_\_ ordered pair (y2 = 1)

y1 is the y coordinate of the \_\_\_\_ ordered pair (y1 = -2)

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Find the slope of the line that passes through (3, 5) and (-1, 4).

Find the slope given the points {(-5,3), (2,1)}.

You try the following:

1) (3, 5), (1, 4) 2) (5, -3), (2, 1)

**FINDING SLOPE GIVEN THE GRAPH OF THE LINE:**

You Try:



Explain in your own words how you find the slope of a line given the graph.

Also explain in your own words what the slope means?

Ex: **Horizontal Lines**  Ex: **Vertical Lines**

Horizontal Lines do not \_\_\_\_\_\_\_\_\_ Vertical Lines do not \_\_\_\_\_\_\_\_\_

All horizontal lines have a slope of \_\_\_\_\_\_ All horizontal lines have an \_\_\_\_\_\_\_\_\_\_\_

slope.

Use the acronym **VUX HOY** to remember the slope of vertical and horizontal lines.

**V**ertical lines

**U**ndefined Slope

**X** = number ( This is the equation of the line)

**H**orizontal lines

**O**- Zero Slope

**Y** = number ( This is the equation of the line)

**GIVEN A POINT AND SLOPE-- CAN WE GRAPH THE LINE?**

Ex. point (2,0) slope = 3



1. \_\_\_\_\_\_\_ the ordered pair (2, 0).

2. From (2, 0), apply rise over run

(write 3 as a \_\_\_\_\_\_\_\_\_\_\_).

3. Plot a point at this location.

4. Repeat rise over run from new point.

5. Draw a straight line through the points.

You Try:

1. point = ( -2,4) and 2. point (0,-4) and

slope = -2/3 slope = 0



**GIVEN THE SLOPE OF A LINE YOU CAN FIND MISSING COORDINATES.**

The slope of a line that goes through the points (r, 6) and (4, 2) is 4. Find r.

To solve this, plug the given information into the formula.



You Try:

Find r.

m= and the line goes through m =  and points (3,4) and (-1,r).

(r,6) and (10,-3).