**Slope Review/Loose Ends**

We’ve spent the past couple days talking about slope and two different equations/forms for slope. Do you remember the two different forms?

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I want to talk about a few more things before we move on into new material.

Example: Write the equation that describes the line in slope-intercept form.

slope = , y-intercept = -4

This is like problems you’ve already done. Go ahead and write the equation below.

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

What if instead of giving you slope and y-intercept, I gave you slope and a point on the line? Could you still solve it? Of course you could!

Example: Write the equation that describes the line in slope-intercept form.

Slope = -3, the point (2,4)

One way to solve this is to put the point on a graph and then find the y-intercept by hand. BUT, there is a way to do this without graphing. Let’s do it now.

First, what’s our equation for Slope-Intercept Form? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What does “m” stand for? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What does “b” stand for? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Notice what we have left in that equation, **y** and **x**. Do you think that could be a place where we could put a point?

Let’s try it. First write out the Slope-Intercept Formula with no numbers written in, just the letters. Write it below.

Now fill in the parts you know. Fill in the slope and x and y coordinates of the point.

When you’re done plugging in things, it should look like this: 4 = -3(2) + b.

Notice we don’t know what the y-intercept is. We should figure this out. Otherwise we won’t be able to write the equation in Slope-Intercept Form. Solve the equation for b. Show your work below.

(Answer: b = 10)

Now that you know the y-intercept, you can write the final equation in Slope-Intercept Form. Write it below and come show it to me.

**Horizontal and Vertical Lines**

We’ve already discussed these two types of lines in class, but I want to make sure you have something down on paper in front of you to help you study for tests.

What is the slope of a horizontal line? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What is the slope of a vertical line? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Now if we had to write horizontal and vertical lines as equations, how would we do it? To answer this we need to visualize what they look like on graphs.

A vertical line would cross which axis, x or y? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

So it should come as no surprise that this equation would look like x=h, where h is just a numerical value. (Example: x = -3, x = 8, etc.)

A horizontal line would cross which axis, x or y? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Right, so this equation would look like y=k, where k is just a numerical value. (Example: y = 2, y = -4, etc.)

Example: Graph the following line, x = 3.

Would this be a horizontal or vertical line? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Write your answer down and check it with a neighbor or me.

*Do Homework:* Practice C WS + pg 333 #1-2, 4-6, 8-10 + pg 338 #17-20