

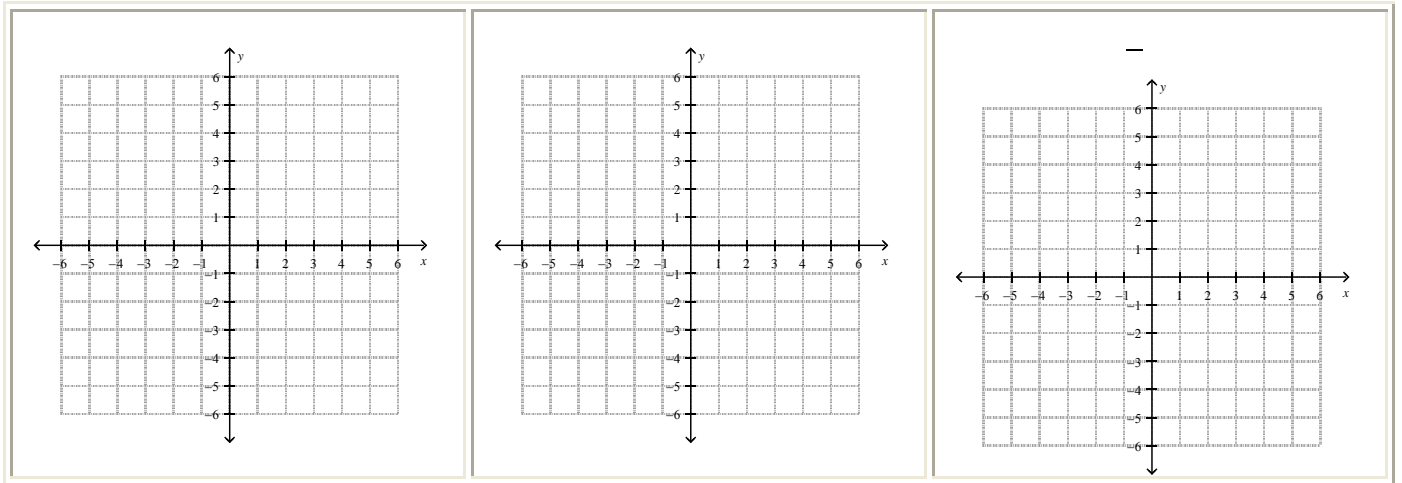
**Algebra I**  
**Lesson 5.7 – Point Slope Form**  
**Mrs. Snow, Instructor**

So we can find the slope of a line if we know 2 points, we also know how to write an equation for a line and graph the line just by knowing the slope and the y-intercept. Well, what if we know the slope and some other point on the line, what can we find? Yes, still we can graph the line and come up with the equation for the line.

**Vocabulary**

**Point-Slope Form –**

The process for graphing is the same as using the slope-intercept form, only the starting point for graphing is a random point, not the y-intercept. Simply walk up or down as the slope indicates. Graph using the slope and a point:



When given a slope and a point, we can plug this data into the point-slope form. Next we can solve for y and have the slope-intercept form. Finally we can work the equation into standard form.

Write the equation of a line using the 3 different forms: Point-slope form, Slope intercept form and Standard form.

By using the definition of slope, we can develop an equation of a line that passes through 2 points, Ok so how?

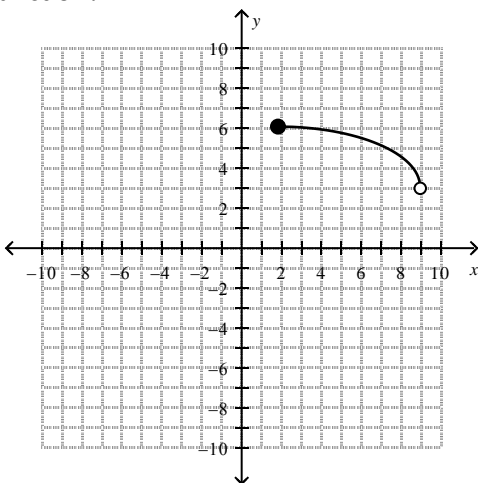
1. Use the slope formula to find the
2. Use a point and the slope to derive the
3. Solving for y we get what equation?

You try: Write an equation in slope-intercept form for the line through the two points.

The cost to place an ad in a newspaper for 1 week is a linear function of the number of lines in the ad. The costs of 3, 5, and 10 lines are shown. Write an equation in slope-intercept form that represents the function. If you have \$50, can you place a ad that is 18 lines long? Explain.

Lines	3	5	10
Cost (\$)	13.50	18.50	31

What is the domain and range of the graphed function?



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