**Math 104Q**

**Group Work on Interpreting Slope of Lines: Cigarette Ads**

In 1995, a study was done to see if cigarette advertisers increased the number of ads placed in twelve particular magazines, such as *Time* and *Rolling Stone,* during the months of January and February to counter smokers' resolutions to quit smoking for the New Year. (The data that follows was taken from a paper presented to the American Public Health Association in San Diego, CA, by authors Michael Basil and Carline Schooler. For the results of the study, visit www.du.edu/~mbasil/cigads.html)

| **Month** | **x** | **Number of Cigarette Ads, y** |
|---|---|---|
| January | 1 | 84 |
| February | 2 | 99 |
| March | 3 | 61 |
| April | 4 | 107 |

1. Using a separate sheet of graph paper, plot the above data as ordered pairs. Be sure to label your x- and y-axes as "Month" and "Number of Ads," respectively.

2. Connect the points using three line segments.

3. Calculate the slope of each of the line segments.

   January to February_____February to March_____March to April_____.

4. During which period did the greatest rate of change occur? Explain your answer.