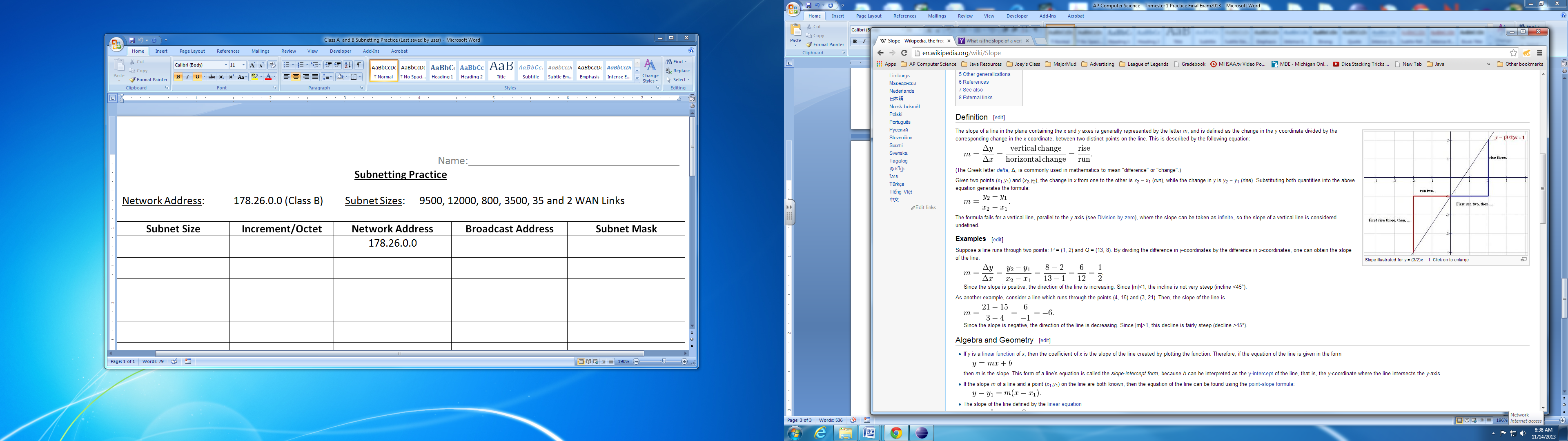
**Trimester 1 Final Exam Review Assignment**

Slope Program

You will write a program called *Slope*. This program will ask the user to type in two coordinates in the format (x1, y1) and (x2, y2). The program will then calculate and output the slope. It will also output the direction of the line (see below). Make sure the coordinates are entered with no spaces following the comma. Each coordinate should be a total of 5 characters. Failure to accommodate this will cause LiveLab to incorrectly score your program.



The slope (m) of a line is solved by:

\*\*Note - The slope may be negative and may not be an integer. (Use a double to store it)

Your program will have to pull out the four variables (x1, x2, y1, y2) from the Strings entered, and then use them to calculate the slope. I would suggest using charAt and manipulating the char value (use Ascii table) to get the desired integer value. You can assume following:

* All coordinates are positive.
* All coordinates are integers.
* All coordinates are a single digit.

\*Note - If x2-x1 is zero, it causes a divide by zero error and your program should output "Slope is undefined."

**Calculating the direction of the line**

If the slope is positive, the line will go up and to the right. (Syntax: "This line slopes up and to the right.")

If the slope is negative, the line will go down and to the right. (Syntax: "This line slopes down and to the right.")

If the slope is zero, the line will be horizontal. (Syntax: "This line is horizontal.")

If the slope is undefined (divide by 0), the line will be vertical. (Syntax: "This line is vertical.")

Sample Output # 1

Enter point # 1 in the format (2,5)

(2,5)

Enter point # 2

(2,1)

Slope is undefined.

This line is vertical.

Sample Output # 2

Enter point # 1 in the format (2,5)

(1,3)

Enter point # 2

(2,1)

Slope = -2.0

This line slopes down and to the right.

Your slope program should be submitted through LiveLab (P\_Slope). Make sure your output matches exactly what is shown above.