

Group FORTRAN Program 6

Due Tuesday October 22, 2013

The Graphing Program

This is a group program.

Write a FORTRAN program to:

- Prompt for, test existence of, and open an input file.
- If the file does not exist, re-prompt the user and accept another file name or 'QUIT' to quit.
- Prompt for, test existence of, and open an output file.
- If the file exists, prompt the user to enter a new file name, overwrite the existing file, or 'QUIT'.
- Once the files are open, read an integer, the only data on the line, which identifies the number of xy points included in the file. The maximum number of points is 100.
- Read the X, Y pairs of real data from the file. There will be one X, Y pair per line. The data will be separate by at least one space.
- Handle too many data points or too few data points.
- Processes real numbers.
- Write the data points to the output file.
- Write the minimum, maximum, and step values for the x and y data to the output file.
- Print the y scale to the output file, use 6 values each with a 10.4 format.
- Print the y axis to the output file.
- Plot the data including the x axis to the output file.
- The number of x lines printed will be determined by the smallest change in x and the domain of x. The minimum number of lines printed will be 20 and the maximum number of lines printed will be 200.
- Print a x scale every five x lines.
- Include the program name (not gxp5.for), program number, and group member names at the top of the program.
- Name the program GxP5.FOR where x is the group number.
- Comment your program.
- Include your names, group number, the class, and program name and number on the device used to submit the program.
- Do not use exit's, goto's etc.