Mathematical functions can be found everywhere: in biology, chemistry, physics, health science, engineering, environmental science, social science, literature, music, business and financing, marketing, education, medicine, history, and more.

Instructions

Write a paragraph or two (no more than one page) for each application that includes the indicated information. Be complete yet concise. Spelling and correct grammar are important as well as neatness and organization. Your report must be typed and a paper copy handed in. Any report, which is not typed, will receive a grade of zero. Graphs may be hand-drawn and any mathematical symbols you don't know how to handle on your computer can be inserted by hand into your paper. Neatness counts!

Hand in: Project 1 Instructions (this page), your report, and the grade sheet

Functions

Choose 2 classes that you either have taken or are currently taking this term. Create an application of a function for each. For each application:

a. Write a paragraph (brief but detailed) that identifies the course and that places the application into some context relevant to the course. That is, explain how the application is important in the course content. Seating assignments or grading procedures are unacceptable applications.

b. Clearly explain why the application is an example of a function citing specific evidence from the application. Do not repeat a textbook definition.

c. Identify an independent (input) variable and a dependent (output) variable and, if possible, write a function depicting the data set and graph.

d. Construct a small table of data. Use proper format that includes a title for the table and context-relevant row or column headings. Check the textbook for which variable (input or output) appears in the rows or columns.

e. Provide a labeled scatter plot of the data set from (d). Use proper format that includes a title for the graph, a label for each axis, and an appropriate scale on each axis. Do not use 'x' or 'y' unless you are comparing xylophones and yachts!

Non-Functions

Choose 2 classes that you either have taken or are currently taking this term. Create an application of a relationship that is NOT a function. For each application:

a. Write a paragraph (brief but detailed) that identifies the course and that places the application into some context relevant to the course. That is, explain how the application is important in the course content. Seating assignments or grading procedures are unacceptable applications.

b. Clearly explain why the application is an example of a non-function citing specific evidence from the application. Do not repeat a textbook definition.

c. Identify an input variable and an output variable and, if possible.

d. Construct a small table of data. Use proper format that includes a title for the table and context-relevant row or column headings. Check the textbook for which variable (input or output) appears in the rows or columns.

e. Provide a labeled scatter plot of the data set from (d). Use proper format that includes a title for the graph, a label for each axis, and an appropriate scale on each axis. Do not use 'x' or 'y' unless you are comparing xylophones and yachts!

Due: FRIDAY, September 14. 10% of the points will be deducted for each day the report is late.

Math 20 Project #1 Grade Sheet Name _____

Mechanics (8 points total)

Grammar and spelling	2 pts ____
Typing, organization, neatness	2 pts ____
Graphics and accuracy	2 pts ____
Grade sheet turned in with report	2 pts ____

Functions (13 points each application)	**Application #1**	**#2**
Identified course (no duplicates)	2 pts ____	2 pts ____
Well-defined description of application	2 pts ____	2 pts ____
Explanation of why application is an example of a function	3 pts ____	3 pts ____
Identified independent (input) variable and dependent (output) variable	2 pts ____	2 pts ____
Table	2 pts ____	2 pts ____
Graph	2 pts ____	2 pts ____

Non-Functions (13 points each application)	**Application #1**	**#2**
Identified course (no duplicates)	2 pts ____	2 pts ____
Well-defined description of application	2 pts ____	2 pts ____
Explanation of why application is an example of a non-function	3 pts ____	3 pts ____
Identified independent (input) variable and dependent (output) variable	2 pts ____	2 pts ____
Table	2 pts ____	2 pts ____
Graph	2 pts ____	2 pts ____

TOTAL POINTS (60 pts.) _____

Letter Grade _____

Due: FRIDAY, September 14. 10% of the points will be deducted for each day the report is late.