1. Do exercise 5.4 on page 126 of the textbook

**Exercise 5.4**

Table

Description automatically generated with medium confidence

Graphical user interface, text, application

Description automatically generated

Table

Description automatically generated

1. Starting with the structure plan specified in the file find\_interval.m, create an mfile that uses logical vectors to find the portion of a set of Gaussian random numbers that fall within a certain interval. The set of Gaussian numbers are given in the MATfile interval\_data.mat (MS Access). The m-file should also save and plot the portion in the interval. Finally, the m-file should also find the index and value of the maximum value in the original set of numbers and the final set of numbers.

Chart

Description automatically generated with medium confidence

1. Following the polynomial curve fit screencast, start with the structure plan specified in the file poly\_curv\_fit.m and create an m-file that will fit a 3rd order polynomial to the noisy data set provided in the MAT-file noisy\_poly.mat (MS Access). The mfile will output the model coefficients and will plot the fitted-curve along with the noisy input data.

Graphical user interface, chart, scatter chart

Description automatically generated