Dear Mr. Watchorn,

I am writing to provide you with an overview of the MATLAB script for Assignment 4, including a discussion of the decisions I made regarding documentation, modularity, and style, the outcomes of the tests on the equations, and my conclusions based on the results.

Executive Summary:

The MATLAB script consists of three matrix math problems that use different functions to calculate and analyze data. The script starts by defining and populating the matrices and then using different functions to calculate the results. The script also calculates the elapsed time taken to run the script.

Discussion:

I chose to document the script by including comments on each line of code to provide clarity and understanding of the logic behind it. The script is modular, as each part of the code performs a specific function that contributes to the overall outcome.

The style of the script is simple, concise, and adheres to the MATLAB coding standards. It uses appropriate variable naming conventions to ensure clarity and readability of the code.

Regarding Matrix Math #1, I chose to define the coefficients of the unknowns and solve for them using the inverse of the coefficient matrix. The solution of the equation provided the number of units of Product A, B, and C that can be manufactured.

Regarding Matrix Math #2, I used matrix multiplication to calculate the overall production distribution based on the production probabilities and the proportion of production from each factory.

Regarding Matrix Math #3, I used the built-in MATLAB functions, max and min, to find the highest number of patients and the lowest average wait time for the week, respectively.

This took about 15 hours to create, though this includes sleeping overnight. Without sleeping this probably took about 7 hours to create.

Outcomes:

The tests on the equations were successful, and the output was as expected. The number of units of Product A, B, and C that can be manufactured, the overall production distribution, the highest number of patients for the week, and the lowest average wait time for the week were calculated correctly.

Conclusions:

In conclusion, the MATLAB script successfully performed matrix math operations on different problems using various functions. The script was documented, modular, and adhered to the MATLAB coding standards. The tests on the equations were successful, and the output was as expected.

Thank you for your time and consideration.

Sincerely,

Michael Dekoski