Assignment 1

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Question 2:

A graph of a line

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[Orange, Blue: Aluminum/Tungsten Carbide] [Purple, Yellow: Magnesium/Tungsten Carbide]

By assessing all the modulus bounds in the following graphs, the best two options were aluminum tungsten carbide and magnesium tungsten carbide. These were the best options because they had the highest young’s modulus and the lowest densities meaning they are the lightest options. When comparing these two-options aluminum tungsten carbide is the better option as it has a little higher young’s modulus making it stiffer with a little higher density start but with the same higher young’s modulus/density point.

A graph of a line

Description automatically generatedA graph of a line

Description automatically generatedA graph of a line

Description automatically generated

A graph of a curve

Description automatically generatedA graph of a line

Description automatically generatedA graph of a curve

Description automatically generated

MATLAB Code:

A screenshot of a computer program

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