

MATLAB Assignment #5

Reading Assignment:

MATLAB Lecture #5

Chapters 6 and 11 in MATLAB – An Introduction with Applications, 4th Edition, by Gilat

MATLAB Assignment:

1. Complete problem 4 on page 185 (function to converts speed in km/h to ft/s). Test the function by writing a main program where the main program prompts the user for the input and the main program displays the output. The main program should display an error message if the input is ≤ 0 .
 - Test the program for 70 km/h.
 - Test the program for 100 km/h
 - Test the program for a negative input.

Turn in a printout of the function, the main program, and the test results.

2. Complete problem 2 on page 184 (function to converts height in inches and mass in pounds-mass to height in cm and mass in kg). Instead of using the command window to test the function as stated in the problem, test the function by writing a main program where the main program prompts the user for the input and the main program displays the output. The main program should display an error message if either input is ≤ 0 .
 - Test the program for a person that has a height of 5'11" (71") and a mass of 181 lbm.
 - Test the program for a negative height
 - Test the program for a negative input

Turn in a printout of the function, the main program, and the test results.

3. Write a function and main program as specified below:
 - Write a function to calculate the three angles in a triangle given the three sides. The three sides should be inputs and the three angles should be outputs.
 - Write a main program that will:
 - Prompt the user to enter the three sides
 - Will check the sides to make sure that the triangle is valid
 - Will call the function described above only if the triangle is valid
 - Will display the results.
 - Test the program for a valid triangle as well as for 6 types of invalid triangles (any side < 0 and any side $>$ sum of the other two sides)