

MATLAB Assignment #1

Reading Assignment:

MATLAB Lecture #1

Chapter 1 in MATLAB – An Introduction with Applications, by Gilat

MATLAB Assignment:

- (80 points) Work the following problems in Chapter 1 of MATLAB – An Introduction with Applications, by Gilat: 1-7 (part a only), 8, 10a, 11, 15, 17
- (20 points) Use MATLAB to solve the problems below. In each case, use variables for all given values and pick good choices for variable names (for example, use Radius rather than x for the radius of a circle). Use comments to label each part of the problem (3A, 3B, 3C, etc) and print the results from the Command Window as in problem 1. Consult a math book for the formulas needed if you do not know them.
 - If a mousetrap-powered car has wheels that are 4.5” in diameter, how far will the car travel in feet if the wheels turn 20 revolutions?
 - If a mousetrap-powered car has wheels that are 4.5” in diameter, how many revolutions must the wheels turn if the car is to travel 100 ft?
 - If a mousetrap-powered car has wheels that are 4.5” in diameter and an axle that is ¼” in diameter, what length of string must be pulled from the axle if the car is to travel 100 feet? Neglect the diameter of the string.
 - If a mousetrap-powered car has wheels that are 4.5” in diameter and an axle that is ¼” in diameter, how far will the car travel if 12” of string is pulled from the rear axle. Neglect the diameter of the string.

Notes for all parts:

- Begin by entering the command **clc** to clear the Command Window.
 - Enter your name, the course number and title, and the assignment number as comments.
 - Enter the problem number (1a, 2a, etc) as comments before each part.
 - Suppress printing (;) with all input variables. Just display the output in the Command Window.
 - Use File – Print to print all contents in the Command Window. If you make errors, start over.
- Note that you can re-run commands by double-clicking on them in the Command History

Window. Do not print any errors or any extra information not required by the assignment. You might want to print after every few parts. (Note that we will see a better way to print results such as these in the next assignment.)

Command Window

```
>> * John Doe
>> * EGR 110 - Engineering Graphics
>> * MATLAB Assignment #1
>> format compact    % suppress extra lines in output
>> * Part 1A)
>> x=5;
>> y=x^3
y =
    125
>> * Part 1B)
```