

Due Date:

Sunday, September 4 at 11pm (submit to blackboard)

General Instructions:

Each problem should be a separate section of your MA1 script submitted through blackboard. All questions should have appropriate commenting and be easy to follow. Test cases and sample output are provided for each problem; however, your code should work for any case.

Problem 1: Determining the record speed in units of miles per hour, it will take a motor to raise a load into the air. Complete Review Question 18-2 and include the following additions:

- Using the algorithm template, write out the algorithm using the test case provided in R 18-2. Include scanned copy of this worksheet in your submitted zipped folder.
- Produce a formatted output of the results (see example below for given test case)

```
Command Window
Enter the speed as a Mach number: >> 2
The speed of the plane is 1534 mph.
fx >>
```

NOTE: Ignore the ">>" in the input statement

Problem 2: Determining the distance the microjoule traveled [km]. Complete Review Question 18-4 and include the following additions:

- Using the algorithm template, write out the algorithm using the test case provided in R 18-4. Include scanned copy of this worksheet in your submitted zipped folder.
- Produce a formatted output of the results (see example below for given test case)

```
Command Window
Enter mass of ethanol [grams]: >> 3.4
The distance the Microjoule traveled is 19.6 kilometers.
```

NOTE: Ignore the ">>" in the input statement

Problem 3: Review Problem 17-24

- Make sure to provide comments referencing the changes made to the code and why.
- In addition, allow for user to define the height and add a formatted output like the example below.

```
Command Window
Define the height of the tank [ft]>> 25
The density of tribromethylene is 2713.03 [kg/m^3].
```

NOTE: Ignore the ">>" in the input statement