In-Class Activity 1 - Using the Plot Function

ME 3001-002- Mechanical Engineering Analysis - Fall 2021

Overview:

You will write a program to generate sample data and graph this data in a correctly formatted scatter plot shown in the figure window.

Learning Objectives:

- You will practice and learn to produce organized graphs to represent a response equation.

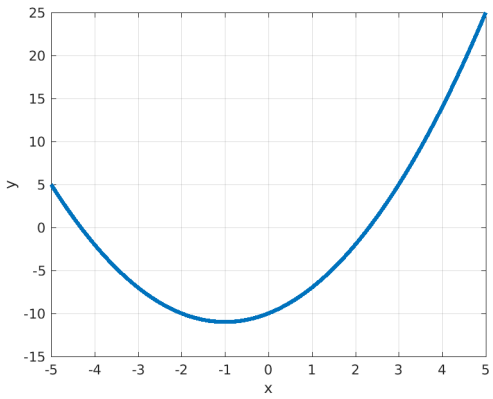
Required Materials:

- **Your Computer**: This activity requires a computer with MATLAB or Octave installed.

Activity:

1. Consider the parabola shown below and write the mathematical function describing the height $y(x)$ and a function of the variable x.

   $y(x) = fn(x) =$



2. Write a simple MATLAB program named **<USERNAME>_using_plot.m** to graph the function in the *Figure(1) window*. Use a range range of x-values ranging from $x = -5$ to $x = 5$ and a stepsize that allows the curve to appear smooth. Label all the axes and give the plot a reasonable title.
3. Estimate or find the values of x that make the function y(x) equal to zero. Show two additional markers on the plot to indicate these points.
4. Save the figure as a PNG file called **<USERNAME>_using_plot.png**

Submit:

Submit **<USERNAME>_using_plot.m** and **<USERNAME>_using_plot.png** to the Activity 1 folder before the posted due date.