ESC 251 **HW 13** **Due: Oct. 2**

Remember to indent the bodies of your IF-THEN and looping structures.

1) (2 pts) Write a MATLAB comand that will sum the rows of a matrix.

2) (4 pts) Recall the definition of the infinity norm of a matrix (look at the notes from Sep. 2 to see the mathematical definition). To compute $||A||_\infty$, you take the maximum of the row sums of the absolute values of A. Write a *single* MATLAB command that will compute $||A||_\infty$.

3) (12 pts) Write a script that does the following:

   a) Generates a table of values for
   $$y = 2x^3 - 6x^2 - 4x + 5$$
   for $x \in [-2, 2]$ using 21 points.

   b) Plots the values in the table (with symbols at the data points).

   c) Determines the maximum value for y and the x value for which it occurs (note, the code should do this; you should not look through the data to find this).

   d) Zoom in on this maximum value on your graph (click on the magnifying class with the plus sign, then click on your graph). How closely do you think the maximum value you got in part c) agrees with the true maximum value?

   e) Replot the graph using 51 points and repeat part c). How much did the maximum value change?