

EXAM 1 – Computer PORTION

Put all of your code in one script and name it: `lastname_firstname.m` (all lower case). Include your name, section number, and CM number in the header section of your code. There should be no output other than what is asked for.

Problem (56 pts)

For this exam problem, we will work with the `pressuredata` file that you used in the project.

- a) (20 points) Plot the pressure data for pressure taps 1-88 (NOT 89) at a time of 1 second. As you recall, the data was taken at 21 Hz, so row 22 will be the row containing the data for $t=1s$. Plot the data with black 'x' symbols and no line. Label the x axis as 'Pressure Tap Number' and the y axis as 'Pressure (Pa)'. Give the plot a good title.
- b) (25 points) In the same script, create a vector containing the average pressure from taps 1-88 (NOT 89) at each time. Find the maximum absolute value in this vector and print the result to the command window in the following format:

```
The largest magnitude of the average pressure is 171.8 Pa
```

- c) (11 points) Still in the same script, plot the average pressures as a function of time. Plot the data with a solid black line. Give the plot good axis labels and a good title. It would be wise to verify that your answer from part b agrees with the largest value you see on your plot.

When you are done, put your script (`lastname_firstname.m`) in the Moodle dropbox.

NOTE: All programming must stop at 8:30 pm. You will have a few minutes after that to put your file in the dropbox if you need that time.