Practical

- Two parts
  - One financial the other physics
  - Must be done in Matlab
  - Will be posted by 6pm today.
  - Both were under 20 lines for me.

HW6

- Posted by 6pm.
  - Mostly Matlab
  - Some generic exam review

Announcements

- Final Exam Review is 7-9pm, April 19, in the large FXB lecture room.
- Friday
  - Matlab version of Project C (By Paul)
  - Class evaluations
- Monday
  - Exam review (30 minutes)
  - Class review (20 minutes)
Write (from last time)

- Write a function “OneM” which takes a vector of integers. It is to return the smallest integer \( X \) where \( X\%A_n \) is equal to 1 for all values in the vector.
  - So OneM\([2\ 3\ 4]\)=13
    - 13\%2 equals 1
    - 13\%3 equals 1
    - 13\%4 equals 1
- In Matlab 13\%4 is written as mod(13,4)

function \( r=\text{tmp3}(N) \) \( \%N \) is scalar
\[
\text{count}=1;\\ 
\text{num}=3;\\ 
\text{array}=[2]\\ 
\]
\[
\text{while (count}<N)\\ 
\quad \text{if (min(mod(num, array)\neq 0))}\\ 
\quad \quad \text{array}=\text{[array num]};\\ 
\quad \quad \text{count}=\text{count}+1;\\ 
\quad \end{\text{if}}\\ 
\quad \text{num}=\text{num}+1;\\ 
\text{end}\\ 
\]
\( r=\text{array}; \)

Write

- Write a function which takes a 3 by 3 matrix representing a tic-tac-toe board and figures out who won (if anyone)
  - On the board:
    - 2=X
    - 1=O
    - 0=No one has gone there
  - Return a 2 if X wins, a 1 if O wins and a 0 if no one has one
    - You may assume there is only one winner.
    - We have done this in class before. But don’t look at the old notes.

Write

- Take a 10 by 10 matrix.
  - Set the upper right-hand corner to 2s.
  - Set the lower left-hand corner to 4s.
  - Set 2 by 2 square in the upper left-hand corner to 5s.
  - Set all edges not already set to be 6s.
  - Set the rest of the matrix to be 0’s.
  - \textbf{Hint: Don’t do things in this order!}
Write

• Write a function which takes two 1 by 2 vectors as arguments. Each vector is to be treated as a complex number where the first is the real component and the second is the imaginary component.
  – Your function (named “multi”) will return the product of those two imaginary number (as a 1 by 2 vector)
  – Recall that \((a, bi)(c, di) = (a*c-b*d, a*d+b*c)\)