PASS
PEER ASSISTED STUDY SESSIONS

FACIL: Neil Douglas
WEEK: 5
EMAIL: neildouglas@cmail.carleton.ca
OFFICE: CSAS, 4th Floor MacOdrum Library
COURSE: ECOR 2606
OFFICE HOURS: Friday 3:00 pm to 4:00 pm

Intro: (15 mins)

- Core concepts covered today:
  - Finding minimums and maximums of functions using MATLAB
  - Golden Section Search
- But first, let's talk about the upcoming midterm!

What do you expect to see on the midterm?

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Activity 1: Finding minimums and maximums using MATLAB (25 mins)

For the function f(x) = sin(x) + cos(2x), find the coordinates (x,y) of the local maximum between x=2 and x=4 and the coordinates (x,y) of the local minimum between x=4 and x=5.5. Output your answers in a nicely formatted sentence using fprintf.

I want us to find the maximum and minimum in different ways, so I ask that you find the maximum using fminbnd and the minimum using fzero.

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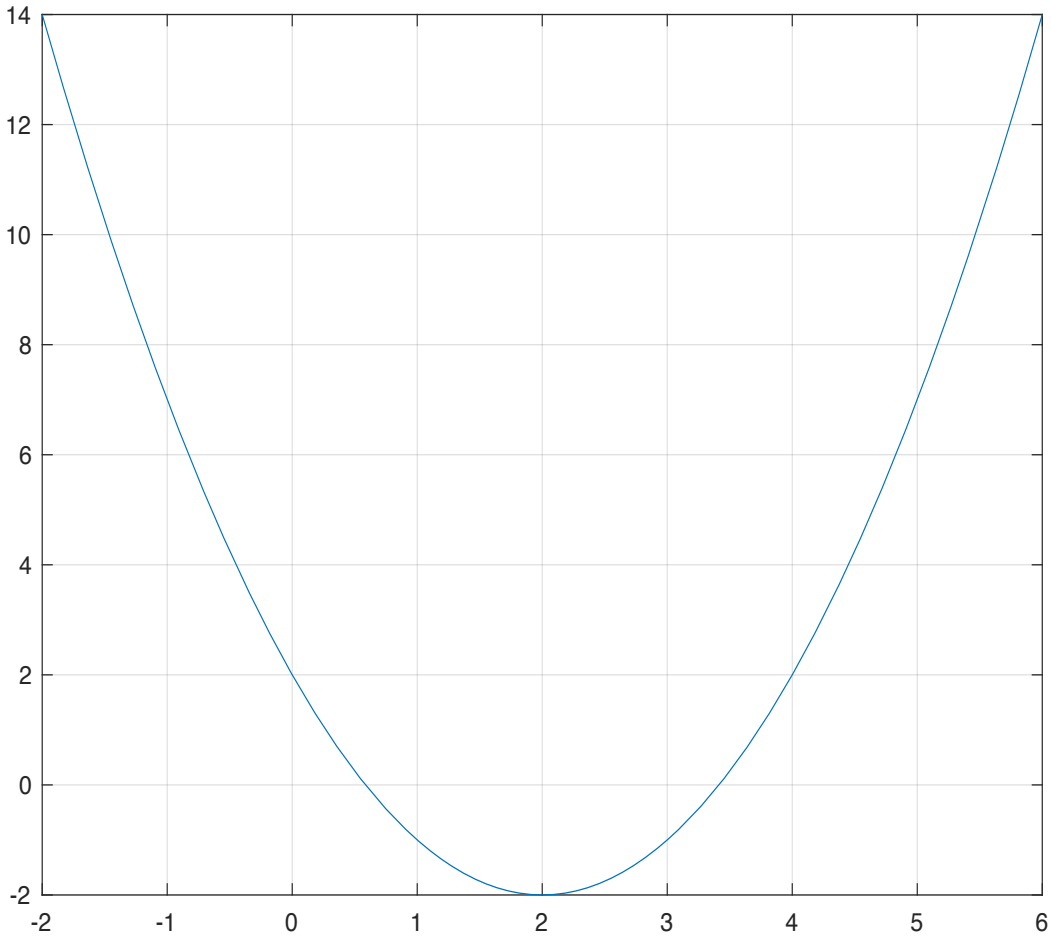
Activity 2: Golden Section Search (40 mins)

Required formulas:

Graph it! Fill out the graph below as we fill out the Golden Section Search table.

We are searching for the minimum of the function below, f(x) = $x^2 - 4x + 2$.



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The Table:

We are searching for the minimum of f(x) = $x^2 - 4x + 2$. Round all answers to three decimal places.

Step	xL	x2	x1	xH	f(xL)	f(x2)	f(x1)	f(xH)	E-Max
1	-0.500			5.000					
2									
3									

Rough work: