

COT 4501 Homework 1, Fall 2009

Assigned Tues Sept 1, Due Thurs Sept 10

HW 1. Assigned Tues Sept 1. Due Thur Sept 10 at the very start of class (2 minutes after the start of class is late; no late assignments accepted).

Be sure to read the homework policy in the syllabus, at:

<http://www.cise.ufl.edu/~davis/cot4501>

Note that in the book, problem numbers are repeated in each of the three sets (Review, Exercises, and Computer problems. To keep things clear, I will call Review problem 1.1 on page 39 R1.1. Exercise 1.1 on page 42 will be E1.1, and Computer Problem on page 1.1 will be called C1.1. Please use this naming scheme in your homework. Staple your hard copy together in the order that the problems appear below.

All problems are from Chapter 1:

Review problems R1.1 to R1.12, R1.15, R1.18, R1.24, R1.25, R1.27, R1.28

Exercises: E1.1, E1.2, E1.3, E1.6, E1.8, E1.15

Computer problems (use MATLAB): C1.1, C1.5. Turn in your m-files as a single zip archive, to the E-Learning web site (see the link on the class web page).

For C1.5, recall that l'Hopital's rule is as follows. If

$$\lim_{x \rightarrow c} f(x) = \lim_{x \rightarrow c} g(x) = 0 \text{ or } \pm \text{inf},$$

and

$$\lim_{x \rightarrow c} \frac{f'(x)}{g'(x)}$$

exists, then

$$\lim_{x \rightarrow c} \frac{f(x)}{g(x)} = \lim_{x \rightarrow c} \frac{f'(x)}{g'(x)}$$