Math 310 – Homework #4 Cover Sheet   **name**:

question #	CONCEPT keywords & MAIN formula/result
# 3.1.30	concept
	result
# 3.2.14 # 3.2.15	
# 3.3.12	
# 3.4.21	
# 3.4.23	

- homework portfolios will also be graded on completeness & presentation.

- certain problems will be designated as practice problems; and although not subject to submission, will be assumed to have been covered for purposes of examinations.

- unless otherwise stated, numbered problems refer to Boyce/DiPrima, 7th edition.

Section 3.1

- practice: # 28, 29

#30 identify ALL possible solutions. Be systematic in your presentation – that is, can you show that you have ALL possible solutions (just because you have found the ones in the back of the text is not a logical demonstration).

Section 3.2

- practice: # 5-10, 13, 23-26 (there are a lot of important concepts in this section.)

#14/15 present as one combined probem. These are conceptual (as opposed to mechanical) questions, explain your reasons & conclusions clearly (you must be using the right keywords here).

Section 3.3

- practice: # 17-20

#12 again, you must clearly explain your ideas here.

Section 3.4

- practice: # 1-4, 7-10, 17-19 (important section.)

#21 explain your steps.

#23 you must become efficient at solving these type of problems.

Maple/Matlab Exercise

- modify the Maple script *sheet01.mws* to solve the nonlinear ODE of # 3.1.30 without any IVs.

- are you satisfied with Maple's response? Is Maple right or wrong here? A bit of both maybe?

- if you're not sure, have Matlab or Maple plot of few of these solutions.