

Do not write your name on the assignment. Write your name only on the back of this sheet of paper and staple your answers on the front of this sheet of paper. Failure to follow these directions will cost you 1 point on the assignment.

This assignment covers chapter 8 through section 8.4. This assignment is due the Tuesday after break which will give you a chance to ask me questions on Monday. I will hand it back on Wednesday, 3/26, in a short meeting at 4:00 unless there is a better time for you. I will be leaving for a conference on Thursday, 3/27. Therefore, the test will be postponed until after the conference. It will be held Tuesday, 4/1, at 4:00 unless you need another time. We will meet in my office. There will be an assignment due on that Friday, 4/4. The review sheet for the exam will be written and published on the web at some point early during break, most likely Monday, 3/17.

Send me an e-mail with the answers on spreadsheets for the questions that require them.

1) (15 points) Is the model of consumption given by $C_t = 100 + 0.9Y_{t-1} + u$, static or dynamic? Is it Stochastic or deterministic? Is it behavioral or technological? Explain your logic.

2) (20 points) There are many estimates of the elasticity of demand for different products. However, there could be a problem with the estimates. What problem must be avoided with them? Use a diagram to explain your point.

3) Suppose that the economy is described by:

$$C = 100 + 0.9(Y-T)$$

$$I = 200 + 0.2Y_{-1} - 10R$$

$$T = -300 + 0.4Y$$

A) (15 points) Derive the reduced form equations for Y, C, I, and T. Explain how you got them and show all work.

B) (10 points) Run a baseline simulation in a spreadsheet for when $G = 250$ and $R = 0.1$. What is the equilibrium level of GDP?

C) (10 points) Run a new simulation for a one-year increase in the interest rate. What is the equilibrium level of GDP?

D) (10 points) Run a new simulation for a permanent increase in the interest rate. What is the equilibrium level of GDP?

E) (10 points) Plot the simulations on one graph. This is probably most easily done on a spreadsheet.

F) (10 points) In which case is there a permanent change in the GDP from the baseline? Why?