

Place your name on the back of this sheet of paper and nowhere else. Staple your answers face up on the front of this sheet of paper. Failure to follow these directions will cost you 10 points. Your assignment will be typed, except graphs can be drawn by hand and mathematical equations can be done by hand. Turn in the Excel file via Canvas. Place your name on an otherwise blank page of the Excel file. Failure to type this assignment will cost you 10 points. If you use double-sided printing or print on the back of scrap paper, I will give you one additional point.

All questions except for #1 should be done before class on 1/16.

1) Suppose the economy is described by $C_t = 600 + .9(\text{Average}(Y_t, Y_{t-1}, Y_{t-2}) - T_t)$, $T_t = .2Y_t$, $I_t = 0.4(Y_t - Y_{t-1})$, $G = 700$, $NX_t = 800 - 0.02Y_t$. Use these equations to answer this question.

A) (15 points) Use the system of equations to solve for Y as a function of exogenous variable(s) and parameters.

B) (15 points) Put the equations into an Excel spreadsheet. Use it to find the GDP for the next 10 years if the GDP was \$3400 last year and \$3300 the year before that. Have Excel plot the GDP over that period. Is that monotonic convergence, monotonic divergence, oscillating convergence, oscillating divergence, or something else? Explain your logic.

2) (10 points each) For each of these results, tell me the probability that the economy is changing. Tell me if that probability is that it is entering a boom or entering a recession. Briefly state how you found the number.

A) Suppose the change in consumer debt increased by 0.4% during a recession.

B) Look at this data. Notice the one-time change in initial claims for unemployment benefits. Use the table for the number of months. <http://wcsaplarjr.info/s26/unemdata.pdf> Use the four week moving average in the second paragraph because your table is based upon monthly data. Also, use just 1 month change because you will note that the previous month it had gone the other direction. (I had to supply the data because new data would come out before you turn this in, and I am not clairvoyant.)

3) (10 points) Suppose that most of the leading indicators were going down and most of the lagging indicators were increasing. What would that indicate about the economy. Explain your logic.

4) (20 points) Draw the LRAS/SRAS/AD diagram with an inflationary gap. Illustrate how the economy will get back to equilibrium if the government does nothing. Explain why the curve(s) moved as drawn. What happens to unemployment, GDP, and inflation?

5) (20 points) Draw the LRAS/SRAS/AD diagram in equilibrium. Trump's tariffs have multiple effects. I want to concentrate on just the effect on the cost of production of goods made in the USA using imported parts. Illustrate the effect of the tariffs. Explain why the curve(s) moved as drawn. What happens to unemployment, GDP, and inflation? Does that agree with <https://taxfoundation.org/research/all/federal/trump-tariffs-trade-war/>