

Write your name on the cover of the test booklet and nowhere else. Enclose this sheet with the booklet. The Excel file will be handed in via Moodle. Your name will only appear on a page of the file that has nothing else on it. Failure to follow these directions will cost you 1 point. The test has 100 points (to be scaled up to 170 points) and is scheduled to take 50 minutes (but you can take the full 2 hours.) Therefore, expect to spend 1 minute for every 2 points. For example, a 10-point question should take 5 minutes.

1) (18 points) Use the data in the tab “Q1” of the [Excel file](#) to forecast quantity as a function of the different prices, and income. Check for multi-collinearity of the independent variables. Is it acceptable to leave all four variables in? Why or why not? **If it is not acceptable**, re-run the regression without one variable and tell me why you left that variable out. **If it is acceptable**, then tell me how many pumpkin pies you would expect to sell to a person with an income of \$50,000 if you charged \$10/pie, \$12/cake, and \$2/doughnuts. Given the results, are pies and cakes substitutes, likely substitutes, likely unrelated, likely complements, or complements? Explain your logic.

2) (20 points) Use the data in the sheet “Q2” on the [Excel file](#) to run a regression to predict sales as a function of income and price. Do the quick checks for heteroscedasticity and autocorrelation. Explain how you know whether or not you had each problem. **If there is only a problem with autocorrelation**, then run a regression which would adjust for that problem. Explain what you did and why. **If both problems exist or there is only a problem with heteroscedasticity**, then do the formal test for it and explain what you did. Use 2.22 as the cutoff.

3) (12 points) Answer EITHER Part A OR Part B.

A) If the nominal exchange rate is $\text{£}0.7/\text{\$}$, the price level in Great Britain is $\text{£}140/Q_{\text{GB}}$, and the price level in the USA is $\text{\$}220/Q_{\text{US}}$, then what is the real exchange rate? Show all work. Which currency is more valuable? Explain your logic.

B) I used to say that $\bar{u} = 5\%$, but I am now saying it is 6%. Use the insider-outsider model to explain why I changed my opinion.

4) (14 points) Answer EITHER Part A OR Part B.

A) Which variable do the Neo-Keynesians get wrong in their explanation of the business cycle? How do they explain the apparent contradiction?

B) What is the *liquidity trap*? Why might it mean monetary policy cannot work?

5) (18 points) For EITHER the event in Part A OR the event in Part B, illustrate the event on the supply and demand for the US\$ compared to the Euro (€). Explain why the curve(s) moved as drawn. Which currency depreciated? How can you tell?

A) The CPI in France increases.

B) The interest rates in USA increases.

6) (18 points) Draw the augmented SRPC/LRPC diagram for a country with 7% expected inflation. Show the 7% on the graph. Illustrate the effects of the event in Part A OR the event in Part B. Explain why the curve(s) moved as drawn. Given your diagram, what do you estimate the inflation rate to be? Explain your logic.

A) The government announces they will decrease the inflation rate to 4%, but nobody believes them. They actually increase the money supply 5%.

B) The government announces they will decrease the inflation rate to 4%, everybody believes them. They actually increase the money supply 5%.