

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. Therefore, expect to spend 1 minute for every 2 points. For example, a 10-point question should take 5 minutes. I cannot give extra time because of the class which follows yours.

1) Do all parts of this question. The points are distributed as described.

A) (6 points) Suppose consumption this year is 80% of this year's income plus 20% of last year's income. Investment this year is 20% of last year's consumption. This year's Government spending is 100. This year's exports are 200. This year's imports are 30% of this year's GDP. Write out these equations.

B) (12 points) Use mathematics to derive the equation for this year's GDP as a function of lagged GDP and exogenous variables. Show all work.

C) (8 points) Place the formulas into your Excel file and have it calculate GDP up through year 80.

D) (6 points) Place the formulas into your Excel file with a new permanent change in government spending to 300. Calculate GDP up through year 80. What are the short-run and long-run government spending multipliers? Explain how you reached your conclusion.

2) (8 points) For EITHER economic significance OR currency, define the property and explain why a variable should have that property.

3) (8 points) Answer EITHER Part A OR Part B.

A) In the table labeled, *Proportions of Occurrences in Which Trends of Various MAGNITUDES Involved Cyclical Reversals of Business Activity*, the farthest right columns are labeled, *Increasing Trends During Cyclical Contractions* and below that it says, *Percentage Increase Larger Than*. It has the following data:

	0.0	0.3	0.5	1.0	3.0	5.0	10.0	20.0
Avg Workweek Manufacturing	0.40	0.63	0.67	0.91	1.00	1.00	1.00	1.00

If you saw that the average workweek in manufacturing went up 0.7%, then would you expect that a recession is ending, a recession is beginning, or is more information needed? Briefly explain your logic.

B) In the table labeled, *Proportions of Occurrences in Which Trends of Various DURATIONS Involved Cyclical Reversals of Business Activity*, the farthest left columns of numbers are labeled, *Decreasing Trends During Cyclical Expansions* and below that it says, *Months of Duration*. It has the following data:

	1	2	3	4	5	6	7	8
M1 Money Supply	0.20	0.32	0.43	0.47	0.60	0.64	0.69	0.69

If you saw that M1 went down for 5 months straight, then would you expect that a recession is ending, a recession is beginning, or is more information needed? Briefly explain your logic.

4) (10 points) For ONE of the following variables, determine if it is a leading, coincident, or lagging indicator. Explain why you would categorize it that way.

A) Average Duration of Unemployment

B) Index of 500 Common Stock Prices

5) (42 points) Illustrate EITHER the event in Part A OR the event in Part B on the IS/LM/FE diagram, SRAS/LRAS/AD diagram, AND the real MS/MD diagram. Use the **same** event for all three diagrams. Explain why the curve(s) moved as drawn. What happens to GDP, the price level, and the real interest rate? Just show the short-run effects.

A) Consumers become more thrifty.

B) Wealth increases.