

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 1 point. Turn in the Excel file via Moodle with your name on an otherwise blank sheet. Your assignment will be typed, except graphs can be drawn by hand and mathematical equations can be done by hand. Failure to type it 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 #1, should be done before the laboratory.

This question refers to the spreadsheet “Lab” on the Excel file “[lab8.xlsx](#).”

1A) (40 points) Calculate the columns *Centered Moving Average*, *Preliminary Seasonal Indicator*, *Average Seasonal Indicator*, *Revised Seasonal Factor*, and *Total Seasonal Factor*.

B) (10 points) If the company sales of \$300,000 in the fourth quarter of this year, what would the seasonally adjusted amount be? If the company did \$600,000 of sales this year, how much would you expect to be sold in the fourth quarter? For both questions in Part B, do the calculation directly on the spreadsheet.

2) (10 points each) Illustrate the following events on the same balance sheet for a bank. Explain each entry. Determine how much the money supply (M1 and M2) changes for each step and explain how you reached that conclusion. Assume the bank starts with no excess reserves.

A) \$1000 is deposited in a checking account.

B) The bank loans out all of its excess reserves.

C) The borrower pays for a service and the person who receives it puts the money in a savings account.

3) (20 points) Explain why a larger  $cu$  has two effects upon the size of the money multiplier. Which is larger? Explain the economic reason that effect is stronger.