

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. Your assignment will be typed, except graphs can be drawn by hand and mathematical equations can be done by hand. The spreadsheets will be turned in via an attachment to an e-mail sent to wcsaplar@bethanywv.edu. Failure to follow these directions will cost you 1 point on the assignment.

1) (10 points each) For each of the following equations, determine if it stochastic, deterministic, behavior, technological, institutional, and/or identity. Explain your logic.

- A) $Q_s = (KL)^{1/2} + u$
- B) Required Reserves = 0.1*(Demand Deposits)
- C) $C = a + b(Y - T)$

2) Suppose the economy is described by the following equations:

$$\begin{aligned}C &= 100 + (3/4)(Y-T) \\I &= 400 + (3/8)Y_{-1} - 1000R \\G &= G \\X - M &= 200 - (1/4)Y \\T &= (1/3)Y.\end{aligned}$$

- A) (20 points) Derive the short-run autonomous expenditure multiplier. Show all work.
- B) (10 points) Use the spreadsheet to determine the baseline, long-run level of GDP if last year's GDP was 3000, G is 900, and R = 0.10. Plot the time path of GDP.
- C) (10 points) Use the spreadsheet to determine the long-run level of GDP if last year's GDP was 3000, G goes to 910 for one period, and R stays at 0.10. Plot the time path of GDP.
- D) (10 points) Use the spreadsheet to determine the long-run level of GDP if last year's GDP was 3000, G permanently goes to 910, and R stays at 0.10. Plot the time path of GDP.

3) (20 points) How has the use of credit cards and ATMs affected the transactions demand for money? Explain your logic.