**ECO 120: Global Macroeconomics** **Name:** ________________________________
**Week 10 Homework: Expenditure Multiplier**

1. Suppose the marginal propensity to save is 0.10 and the marginal propensity to import is 0.25. Suppose an increase in consumer confidence leads to a \$180 billion increase in consumer spending. What is the change in real GDP?

2. Suppose U.S. consumers become more cautious, and as a precautionary measure, increase their saving and decrease their demand for final goods and services by \$270bn. Suppose the marginal propensity to consume is 0.80 and the marginal propensity to import is 0.20. Compute the immediate change in real GDP in the United States.

3. Suppose a decrease in income in Europe causes a decrease in demand for U.S. exports to Europe by \$575bn. Workers and business owners experience a decrease in income. Suppose empirical evidence from a past event when consumers received a \$600 federal tax stimulus check shows that when consumers increased their expenditures by \$440 and imports, in particular, by \$100. Compute the immediate change in real GDP in the United States.

4. Suppose the marginal propensity to consume is 85% and the marginal propensity to import is 15%. The economy is in a recession. Real GDP is $21 trillion, and at full employment real GDP would be $23 trillion. Congress and the president decide to increase government spending in an effort to push real GDP to potential GDP. How much should government spending be increased by?

5. What happens to the expenditure multiplier if MPS increases from 5% to 10% (assume MPM=0). Which MPS gives the government greater power to influence GDP? Which MPS creates a less volatile economy (i.e. which MPS causes smaller fluctuations in real GDP)?

6. Answer all the following questions ask you to consider the Pell Grant Federal Program in the context of this unit's material and the previous unit's. Answer the following questions regarding short-run and long-run benefits and costs to Pell Grants. The following questions The Federal Pell Grant Program provides funding to undergraduate students who display exceptional financial need and have not yet earned a bachelor's, graduate, or professional degree. More information can be found at https://www2.ed.gov/programs/fpg/index.html.

   (a) Describe the short-run economic impact to the cities where Pell Grant recipients go to school.

   (b) Suppose there is an expansion of the program which is not funded with an increase in taxes and no matching decrease in other government expenditures. Describe the impact on the government budget deficit, and describe and illustrate the impact on the equilibrium level of investment and interest rate.

   (c) Suppose over time, after Pell Grant recipients graduate college that they go on to earn higher salaries, and therefore pay more in taxes, save more, and consume more. Describe and illustrate the impact on the equilibrium level of investment and interest rate.

   (d) Describe and illustrate the impact that the program can have on labor productivity and real GDP per capita.