

Economics 1102-33
Homework 3
Due Date: March 5 in class
Total Points = 100

All answers need to be typed except calculations and graphs.
Show all your work for full credit.
Graphs need to be correctly labeled for full credit.
No late Assignments are accepted

Question 1: Calculating the Equilibrium on the Demand Side (30 points)

- a) **(15 points)** Suppose you have the following data:
 $C = 12 + 0.7(Y - T - Tr)$
 $I = 4$
 $G = T = 10$
 $NX = 2$
 $Tr = 0$
Find the equilibrium on the demand side, Y^* .
- b) **(15 points)** Suppose that there is an increase in investment, I . Now $I = 7$. Find the new equilibrium Y^* and calculate the oversimplified multiplier.

Question 2: Multiplier with Imports (70 points)

Suppose there are only two countries: the US and Mexico. Consider the following data:

$MPC_{MX} = 0.4$ (MPC in Mexico)
 $MPI_{MX} = 0.03$ (so 3% of an additional \$1 of income in Mexico is spent on the American goods)
 $MPC_{US} = 0.6$ (MPC in the US)
 $MPI_{US} = 0.1$ (so 10% of an additional \$1 of income in the US is spent on the Mexican goods)

- a) **(20 points)** Suppose Mexican government increases government spending by \$1 billion. By how much does Mexican GDP grow? Show your calculations.
- b) **(20 points)** Calculate the increase in the American GDP induced by the increase in Mexican GDP.
- c) **(30 points)** After the increase in the US GDP, what do you think is going to happen with the Mexican GDP? Calculate the amount by which Mexican GDP grows as a result of the increase in the US GDP.