14.02 Introduction to Macroeconomics
Problem Set # 7

Question 1

Answer True, False or Uncertain to each of the following statements. Be sure to explain your answer. No credit will be given for unsupported answers.

1) An appreciation in the dollar real exchange rate will cause the quantity of imports to rise, but the total cost of those imports to fall in dollar terms.

2) A larger country will tend to have lower imports, relative to GDP, than a smaller one because its population is larger.

3) An appreciation in the dollar will cause the price of foreign made goods in the US to fall, assuming that the foreign price level remains constant

4) An appreciation in the real exchange rate of the dollar will make US consumers better off, and will also make US producers also better off.

5) Any fluctuation in the nominal exchange rate will not lead to changes in the real exchange rate, because the domestic price level will immediately adjust to offset the change

6) An increase in the income earned on US funds invested abroad will lower the capital account surplus, but leave the current account unchanged

7) An increase in the amount of funds US citizens invest abroad will lower the capital account deficit.

8) If the interest rate is higher in Germany than in the US, then US investors should shift their funds to Germany.

Question 2

In an open economy Aggregate Demand is given by Z below, where Y is domestic GDP and Y^* is foreign GDP. For simplicity we assume that domestic prices are fixed i.e. the AS curve is flat in (P, Y) space. (This allows us to ignore the supply side issues considered in the last three problem sets)

$$Z = C(Y) + I + G + \varepsilon Q(Y, \varepsilon) + X(Y^*, \varepsilon)$$

a) Draw Z in (Z, Y) space. Why does the curve slope up? Why is the slope less than one? Indicate on the diagram the point that represents goods market equilibrium.

b) What happens to equilibrium GDP of the US when foreign GDP rises? Show this on the diagram in (Z, Y) space.

c) In the above scenario, what happens to the trade balance (assume that the value of exports equaled the value of imports before the rise in Y^*). Is there any effect, direct or indirect, on imports to the US?

d) Now suppose that the US government decides to cut back on welfare programs. Show the effect on equilibrium GDP in the (Z, Y) diagram. What is the effect on the trade balance, assuming that the value of exports equaled the value of imports before the reform was initiated.