1. Use the FOREX and money market diagrams to answer the following questions. This question considers the relationship between the Korean won (WON) and the Chinese yuan (CNY). Let the exchange rate be defined as wons per yuan $E_{W/Y}$. On all graphs, label the initial equilibrium point A.

(a) Illustrate how a **permanent** increase in Korea’s money supply affects the money and FOREX markets. Label your short-run equilibrium point B and your long-run equilibrium point C.

(b) Using your analysis from above, state how each of the following variables changes in the **short run** (increase/decrease/no change): Korea’s interest rate, China’s interest rate, $E_{W/Y}$, Korea’s price level.

(c) Using your analysis from above, state how each of the following variables changes in the **long run** (increase/decrease/no change relative to their initial values at point A): Korea’s interest rate, China’s interest rate, $E_{W/Y}$, Korea’s price level.

(d) Explain how overshooting applies to the situation analyzed in part a)-c) above. Illustrate how the exchange rate changes over time.

2. Use the FOREX and money market diagram to answer the following questions. This question considers the relationship between the euro (€) and the U.S. dollar ($). Let the exchange rate be defined as U.S. dollars per euro $E_{$/€}$. On all graphs, label the initial equilibrium point A. Suppose that real money demand in the U.S. decreases, but U.S. money supply remains unchanged.

(a) Assume this decrease in real money demand is **temporary**. Using the FOREX and money market diagrams, illustrate how this change affects the money and FOREX markets. Label your short-run equilibrium point B and your long-run equilibrium point C.

(b) Assume instead that this decrease in real money demand is **permanent**. Using a new diagram, illustrate how this change affects the money and FOREX markets. Label your short-run equilibrium point B and your long-run equilibrium point C.

(c) Using time series diagrams, illustrate how each of the following variables changes over time in response to the **permanent decrease** in real money demand: nominal money supply $M_{US}$, price level $P_{US}$, real money supply $\frac{M_{US}}{P_{US}}$, U.S. interest rate $i_{US}$, and the exchange rate $E_{$/€}$.

3. Suppose that the foreign interest rate rises and your domestic currency is under a regime of fixed exchange rates (that is, the domestic central bank has committed itself to fixing the exchange rate and will intervene in the foreign exchange market to defend the official exchange rate level).
(a) Use the FOREX and money market diagrams to show the effects of this change on the domestic interest rate and the domestic nominal money supply in the short run.

(b) Describe any required changes in the balance sheet of the domestic central bank.

4. Show (using the credit/debit tables) how each of the following would affect the U.S. balance of payments (BOP). Your records should include a description of the transaction being recorded and the accompanying credit/debit entry in the CA, FA, or KA accounts.

   (a) A U.S. tourist to Spain sells a pair of his used Levi’s jeans to a Spanish acquaintance.
   (b) The Chinese government carries out an official foreign exchange intervention in which it uses U.S. dollars held in an American bank to buy Chinese yuan from American citizens.
   (c) An Italian tourist purchases a Dell laptop in the U.S. using a bank account in Italy.

5. Let’s analyze the economic situation of the island of Waitakere. In 2006, the island had a current account deficit of $1.5 billion, and its capital account was in a $200 million surplus. In addition, Waitakere factors located in foreign countries earned $600 million. Waitakere had a trade deficit of $700 million. Assume Waitakere never gives, nor receives unilateral transfers. We know that Waitakere’s GDP was $9 billion.

   (a) What happened to Waitakere’s net foreign assets during 2006? Did they acquire or lose foreign assets during that year?
   (b) How much income did foreign factors of production earn in Waitakere during 2006?
   (c) Compute Waitakere’s gross national income (GNI).
   (d) Compute Waitakere’s net factor income from abroad (NFIA).