Question #1. T- Accounts and the Money Multiplier

All Banks are required to hold $1 in reserves for every $10 of deposits in this economy. Assume that all accounts were previously equal to 0 (or that we are only looking at changes), and that there are an infinite number of banks in this economy.

a) At first Susan has $3000 cash in hand. Suppose that she deposits all of these in Bank #1. Fill the following table for Bank #1 immediately after Susan has made her deposit. Be sure to label all entries.

Bank #1's Balance Sheet

Assets	Liabilities

b) Because Susan deposits $3000 in cash in Bank #1, Bank #1 has
   i. Total Reserves =
   ii. Required Reserves =
   iii. Excess Reserves =

c) Now suppose that Bank #1 lends out any excess reserves to Bill. Bill uses the entire loan to buy a TV from Best Buy, who deposits his payment in Bank #2. Fill in the following table for Bank #1 and #2 immediately after Best Buy has deposited his payment (Bill's loan) in Bank #2. Be sure to label all entries.

Bank #1's Balance Sheet

Assets	Liabilities

Bank #2's Balance Sheet

Assets	Liabilities

d) Suppose that Bank #2 lends out all of its excess reserves to Fred, and Fred's loan ends up being deposited in Bank #3. Fill in the following tables for bank #2 and bank #3

Bank #2's Balance Sheet

Assets	Liabilities

Bank #3's Balance Sheet

Assets	Liabilities

e) Suppose this lending cycle continues many times (infinity). Fill in the following table for All Banks Combined. (Assuming there are no currency drains.)

Combined Bank Balance Sheet

Assets	Liabilities

f) Compared the scenario above to one in which Susan hold the entire $3000 as cash. How much will the above cycle (started with Susan depositing all of the money into a bank) increase the money supply in our economy? (Assuming there are no currency drains.) What is the money multiplier?

g) Use the Combined Bank Balance Sheet we get from e), if Michael withdraws $100 to put in his wallet. (maybe just to avoid the situation that some armed robbery happens to him but he doesn't have enough money to give to the guy, and then the guy shall be very angry at him, or maybe aliens…use your imagination) What will happen to the money supply in our economy? (Assuming there are no currency drains.)

Combined Bank Balance Sheet

Assets	Liabilities

Question #2. Open Market Operations

Suppose the Federal Reserve bank buys back 1 million worth of government bonds in the market through an open market operation.

a) Assume that the required reserve rate for deposit is 10%. What is the effect on the money supply by this open market operation?

b) Assume that the required reserve rate for deposit is 20%. What is the effect on the money supply by this open market operation

c) Assume that the required reserve rate for deposit is 20%. But instead of buying bonds, the Fed decides to sell 1 million worth of government bonds. What is the effect on the money supply by this open market operation

Question #3.

Suppose that the Federal Reserve forecasts a recession in 2008 for our economy (i.e. the aggregate demand will be too low).

(a)To boost up our economy, should the Fed try to lift up the interest rate or should it try to lower it?

(b) To achieve this goal, what open market operation should the Fed do? Should they purchase bonds or should they sell bonds in the market?