Econ 330 – Money and Banking
Problem Set 3

Due: Thursday, July 6

Question 1

The balance sheet of The Ultimate Bank, in million dollars, is

Assets		Liabilities	
Reserves	20	Checkable deposits	150
Loans	110	Discount loans	20
Securities	50	Bank capital	10
Total	180	Total	180

The required reserve ratio is 10%. Show what happens at each stage when the following transactions occur (successively):

(i) a big client withdraws \$10 million and the bank takes on a discount loan just enough to cover for the required reserves gap,

(ii) the bank sells securities to cover up only for the discount loan taken in the previous part,

(iii) another client deposits \$5 million in her checking account,

(iv) the bank gives out all the excess reserves as loans.

Question 2

Given the balance sheet above, suppose all the loans on the asset side and the checking deposits on the liabilities side are interest-rate sensitive (suppose all the deposits with The Ultimate Bank are interest-bearing checking accounts). The average duration of the assets is 3 years, while the average duration of the liabilities is 2 years. Suppose the interest rate increases by 5 percentage points (5%) after each of the transactions above. Calculate the gap and the change in profits, and the change in the bank's net worth *after each* of the transactions above.