Macroeconomics
Unit 4 Practice Sheet

Part 1: Nominal v. Real Interest Rates- *Answer the questions. Show your work.*

1. Assume the nominal interest rate is 7% and inflation is 3%. What is the real interest rate?

2. Assume the real interest rate is -2% and the inflation rate is 5%. What is the nominal interest rate?

3. Assume the real interest rate is 4% and the nominal interest rate is 7%. What is the expected rate of inflation?

Part 2 - Bank Balance Sheets- *Use the balance sheet below to answer the questions.*

Assets		Liabilities	
Required reserves	$2,000	Demand deposits	$20,000
Excess reserves	$0		
Customer loans	$7,000		
Government securities (bonds)	?		

4. Calculate the total amount of government securities this bank owns.

5. Calculate the required reserve ratio. Explain how you got your answer.

6. Suppose that an individual deposits $10,000 of cash into her checking account. What is the immediate effect of the cash deposit on the M1 measure of the money supply? Explain.

7. What is the dollar value of the bank's required reserves after the $10,000 cash deposit? Explain.

8. What is the dollar value of the bank's excess reserves immediately after the $10,000 cash deposit? Explain.

9. Calculate the maximum increase in the money supply as a result of the $10,000 deposit. Show your work.

10. What are two different behaviors that could prevent the money supply from increasing by the maximum amount?

11. Assume instead that the government buys $10,000 of securities. What is the immediate effect on the M1 measure of the money supply? Explain.

12. Calculate the maximum increase in the money supply when the government buys $10,000 of securities. Show your work.

13. Will the demand deposits for this bank initially increase, decrease, or stay the same when the government buys $10,000 of securities? Explain.

14. Assume customers withdraw more money from this bank then it has in reserves. What two options does the bank have to avoid becoming insolvent?

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Part 3 - Monetary Policy- *Fill out the chart showing how each influences the economy.*

15. How does a decrease in the interest rate affect investment? Explain.

16. What is the difference between the discount rate and the federal funds rate?

	Recessionary Gap	Inflationary Gap	AS or AD
Long-run Self-Adjustment			
Fiscal Policy			
Monetary Policy			

Part 4- Loanable Funds- *Fill out the chart.*	Demand or Supply ↑ or ↓	Real Interest Rate
17. To decrease unemployment, the government deficit spends		
18. Political unrest causes foreigners to take money out of the economy.		
19. Businesses expect lower sales and worse economic conditions.		
20. In anticipation of longer life expectancy, people begin to save more		

Part 5- FRQ Practice- Complete the following question from the 2017 AP exam (Question 2).

2. Assume that an economy is in long-run equilibrium. Assume that consumers wish to hold less money because they use credit cards more frequently to purchase goods and services than cash.

   (a) Draw a correctly labeled graph of the money market and show the effect of the reduced holdings of money on the equilibrium nominal interest rate in the short run.

   (b) Based on the change in the interest rate in part (a), what will happen to each of the following in the short run?

      (i) Prices of previously issued bonds

      (ii) The price level and real income. Explain.

   (c) With a constant money supply, based on your answer to part b(ii), will the velocity of money increase, decrease, or remain the same, or is the change indeterminate?

   (d) If the central bank wishes to reverse the change in the interest rate identified in part (a), what open market operation would it use?