

Name:
Section:
T.A. Name

180.101 ELEMENTS OF MACROECONOMICS

Fall, 2011

Problem Set #5

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INSTRUCTIONS: Above, write your name, section number and T. A. name. Answer each question in the space provided, or on the back of the same sheet.

1. Suppose the Fed purchases \$5 billion worth of government bonds from Bill Gates, who banks at the Bank of America in San Francisco. Show the effects on the balance sheets of the Fed, the Bank of America, and Gates. Does it make any difference if the Fed buys bonds from a bank or an individual?

2. Explain and show using appropriate diagrams what a \$5 billion increase in bank reserves will do to real GDP under the following set of assumptions:
- a. Each \$1 billion increase in bank reserves reduces the rate of interest by 0.5 percentage point.
 - b. Each 1 percentage point decline in interest rates stimulates \$30 billion worth of new investment.
 - c. The multiplier for investment is 2.
 - d. The aggregate supply curve is so flat that prices do not rise noticeably when demand increases.

3. Consider an economy in which government purchases, taxes, and net exports are all zero, the consumption function is

$$C = 300 + 0.75 Y$$

and investment spending (I) depends on the rate of interest (r) in the following way:

$$I = 1000 - 100r$$

Find the equilibrium GDP if the Fed makes the rate of interest (a) 2 percent ($r=0.02$), (b) 5 percent, and (c) 10 percent.