

ECONOMICS 1 (Lecture1)
PROBLEM SET #5

Due in *lecture* (hand in to your GSI) on Monday May 10, at the absolute latest.

1. Money and Banking (Chap. 29): Let's say we have an economy with only three banks. Banks A, B, and C have \$12,000, \$15,000 and \$20,000 respectively in deposits. They keep exactly the 10% of required reserves (but no more).
 - a) Describe how the 'Fed' for that economy can increase the money supply by \$8,000 by changing the required reserves ratio. Give an intuitive explanation
 - b) Describe how the 'Fed' for that economy can increase the money supply by \$8,000 by what are called open market operations. Give an intuitive explanation
 - c) Describe (without getting into numbers) a third way in which the Fed could increase money supply. Explain briefly.

2. Monetary Policy and the National Economy (Chap. 30): When the U.S. government sells Treasury Bills (T-Bills) to, say, insurance companies, it essentially does the same thing a student does when she phones home for money and then promises her parents in writing to pay it back next year with interest. Let's assume that a single T-Bill has a face value of \$1000, is sold April 1 1999 for \$925.00, and is fully redeemable on April 1 2000. The student, Maria, has borrowed \$1200 from her parents on April 1 this year, and promises to pay back capital and interest (9%) next year. *For both operations*, answer each of the following questions (a to i):
 - a) what is the actual security?
 - b) what is the price on April 1 1999?
 - c) what is the maturation date?
 - d) who is the lender?
 - e) who is the borrower?
 - f) what is the face value (or its equivalent) of that security?
 - g) what formula do you use to calculate the interest rate?
 - h) what is the interest rate?
 - i) what is the discount?

Additional questions about securities:

 - j) what distinguishes U.S. T-Bills from other securities?
 - k) explain why the price and interest rate of a bond always move in opposite directions.

3. What Should the Federal Reserve Do? (Chap 31): Name two 'automatic stabilizers' and explain (briefly) how they work.

4. Budget Deficits and the National Debt (Chap 32): Explain why many representatives in Congress 'like' deficit spending while the Fed generally doesn't? What would happen if the Fed became very accommodating toward deficit spending? (what does that mean?) Can the Fed buy T-Bills directly from the Treasury?

5. Inflation and Unemployment (Chap. 33): What is the Phillips curve? What shape do you expect it to have in the short run? In the long run? Explain (very briefly) why those two shapes are different.

6. International Advantage and Comparative Advantage (Chap.34): A lawyer can do the research for a legal brief in one hour, and she can also type it in 15 minutes. Her secretary, who knows a thing or two about the law, can do the legal research for that same brief in 5 hours and type it in 30 minutes. Who has an absolute advantage in research? In typing? Who has the comparative advantage in research? In typing? Should the lawyer fire the secretary (i.e., not `trade´ with her) since she can research *and* type more efficiently? Can you think of any parallels with trade among countries?

7. Productivity and Growth (Chap.37): Increases in U.S. productivity have a large impact on U.S. standards of living. How? What is the importance of a country's `competitiveness´ (how its productivity compares with other countries)? Discuss *very* briefly.

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