

1. Suppose that the country of Frugalia increases its saving rate—the proportion of income that households allocate to private saving.
  - a. Using a graph, show the effect that this would have on the equilibrium real interest rate and on the level of capital investment in Frugalia (ignoring any international repercussions).
  - b. What effect would this change in capital investment have on the growth of potential per-capita GDP in Frugalia in the years after the change?
  - c. If there are diminishing marginal returns to capital in Frugalia, how would the marginal product of capital change over time? How would this affect Frugalia's growth rate in the longer run?
  
2. (From Mankiw Chapter 15) Suppose that Congress passes a law requiring employers to provide employees with some benefit (such as health insurance or pension contributions) that raises the cost of each employee by \$4 per hour. (Assume, for this problem, that this benefit was not previously provided by employers. Use graphs in your answers.)
  - a. What effect does this law have on the demand for labor? (Be specific about both direction and magnitude.)
  - b. If employees value this benefit at exactly the \$4 per hour that it costs, what effect does the law have on the supply of labor? (Again, be as specific as possible.)
  - c. If the wage adjusts freely to balance the labor market, how does the law affect employment and the wage? Are employers better or worse off? Are employees better or worse off? Explain.
  - d. Now suppose that before the law was enacted, the equilibrium wage in this market was \$3 above the minimum wage. Is your answer to part (c) different under this condition? Explain.
  - e. Now, returning to the freely adjustable wage situation, suppose that workers do not value the benefit at all. Re-do the analysis of parts (a) through (c).
  
3. Suppose that the economy experiences rapid “sectoral shifts,” in which some industries grow rapidly while others stagnate or shrink. How might this affect the natural unemployment rate and why? Are there policies that might help in such a situation?

4. (From Mankiw Chapter 16) The economy of Reedia contains one million one-dollar bills.
  - a. If Reedians hold all of their money as currency, what is the quantity of money?
  - b. If Reedians hold all of their money as bank deposits and banks hold 100% reserves, what is the quantity of money?
  - c. If Reedians hold equal amounts of currency and bank deposits and banks maintain 100% reserves, what is the quantity of money?
  - d. If Reedians hold all of their money as deposits and banks hold 10% reserves, what is the quantity of money?
  - e. If Reedians hold equal amounts of currency and bank deposits and bank hold 10% reserves, what is the quantity of money?
  
5. (From Mankiw Chapter 17) If the marginal tax rate on nominal interest payments is 40%, compute the before-tax real interest rate (*i.e.*, the real interest rate if there were no tax) and the after-tax real interest rate in each of the following cases:
  - a. The nominal interest rate is 10% and the inflation rate is 5%.
  - b. The nominal interest rate is 8% and the inflation rate is 3%.
  - c. The nominal interest rate is 6% and the inflation rate is 1%.
  - d. What do these results imply for the “Fisher effect” in an economy in which nominal interest is taxed? Would the same be true if the government taxed real interest income rather than nominal? Explain.
  
6. Some have argued that the current fiscal and monetary situation in the United States makes it likely that inflation will increase in the future.
  - a. If people do not correctly anticipate the rise in inflation, who will gain and who will lose from the unexpectedly high inflation? Why?
  - b. If people do correctly anticipate the change, what will change to eliminate some or all of the effects of part (a)?
  - c. If people correctly anticipate the change, will there be any beneficial or adverse effects to the government or to individuals in the economy? Explain.