

Econ 305–Fall 2007
Problem Set 1
Posted: September 14
Due: September 21

1 Question 1

Assume that apples cost \$0.50 in 2002 and \$1 in 2007, whereas oranges cost \$3 in 2002 and \$1.5 in 2007. If 10 apples and 5 oranges were produced in 2002, and 6 apples and 12 oranges were produced in 2007, what is the CPI for 2007 using 2002 as the base year?

2 Question 2

Assume that equilibrium GDP(Y) is 5000. Consumption is given by $C = 500 + 0.6Y$. Investment(I) is given by $I = 2000 - 100r$, where r is the real interest rate in percent. No government exists. Calculate the equilibrium real interest rate.

3 Question 3

3.1

Suppose there is a technological breakthrough that increases the productivity of all capital, and consequently, increases the demand for investment. Using the long-run model of the economy developed in Chapter 3, graphically illustrate the impact of the increased investment demand. Be sure to label:

the axes, the curves, the initial equilibrium values, the direction curves shift, and the terminal equilibrium values.

3.2

State in words what happens to: the real interest rate, national saving, investment, consumption, and output. (When answering this part, please use both the graph you draw in the previous section and the algebraic analysis we did in class.)