

PROBLEM SET 3

DUE AT THE BEGINNING OF LECTURE ON TUESDAY, MARCH 10TH

You may work together on the problems, but your answers must be ***in your own words*** and ***handwritten***. You also must ***list the other students with whom you worked***.

For all questions be sure to explain your answers and to use graphs whenever appropriate.

1. Consider the following questions about a monopolist.
 - a. Suppose that negative new information about the quality of the good produced by the monopolist reduces the quantity of the good demanded at a given price. How, if at all, will the monopolist change the quantity it produces and the price it charges?
 - b. How if at all, will a monopolist respond to a rise in its fixed costs in the short run? How if at all, might it respond to the rise in fixed costs in the long run?
 - c. When a good is produced by a monopolist, is there misallocation of the good among consumers?

2. Describe how each of the following developments would affect the employment and wages of security guards.
 - a. Technological progress elsewhere in the economy raises wages in other sectors.
 - b. Improvements in education and drug treatment reduce the number of criminals.
 - c. Security guards form a union that negotiates a wage that is above the previously prevailing wage.

3. Basic scientific discoveries, such as the development of new mathematical techniques or the development of the germ theory of disease, almost certainly have large positive externalities.
 - a. Use welfare analysis to show that a free market is likely to lead to less basic scientific research than is socially optimal.
 - b. Describe three possible ways that society (either through private solutions or government actions) could deal with the problem of too little basic scientific research.

4. Consider the markets for low-skilled and high-skilled labor in the United States. Describe how each of the following developments is likely to affect the wages of low-skilled workers relative to high-skilled workers.
 - a. Cuts in funding for education programs targeted to low-skilled workers (such as vocational education and education programs in prisons) cause low-skilled workers to be less productive than they were before.
 - b. A change in immigration laws causes many high-skilled immigrants to leave the U.S.

5. Suppose that there is international trade, and that because of developments abroad, the world price of avocados (relative to other goods and services) rises. Show using a PPC/CPC diagram (with avocados on the horizontal axis and everything else on the vertical axis) how, if at all, this development would affect the U.S. PPC, the U.S. CPC, and U.S. production of avocados and other goods and services.