

Homework Quiz: Monday, April 6

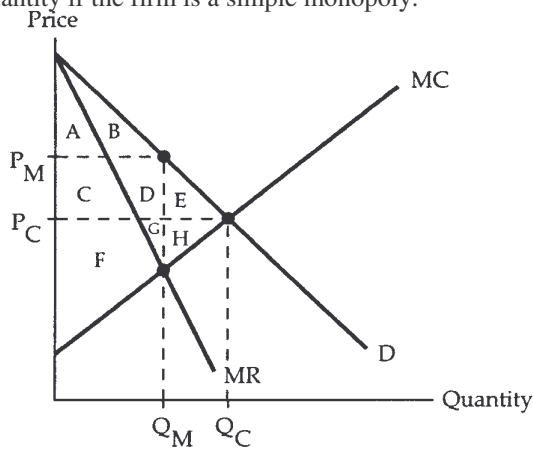
1. Computer chips are manufactured by Japanese firms and sold in the United States. Japanese imports are currently subject to a \$60 per unit tariff. A government official argues that the tariff is keeping prices too high and recommends a policy that would eliminate the \$60 tariff on imports.

Suppose that the supply of computer chips is characterized by an upward sloping supply curve and U.S. demand is characterized by a normal downward sloping demand curve. Suppose these curves are given by the following equations:

U.S. Demand equation: $P = -2Q + 240$

Supply equation: $P = 4Q + 60$

- i. Calculate P_t , Q_t , P_{new} (w/o tariff) and Q_{new} (w/o tariff)
 - ii. Calculate consumer surplus before and after the removal of the tariff.
 - iii. According to the efficiency criterion (and assuming we care only about the welfare of Americans) should we reject or accept the policy recommendation? Why?
2. P_C and Q_C are the equilibrium price and quantity if the firm behaves competitively, and P_M and Q_M are the equilibrium price and quantity if the firm is a simple monopoly.



- i. What area represents the producer's surplus earned in the monopoly equilibrium? _____
- ii. Suppose this firm initially acted competitively. If the firm switched to the simple monopoly equilibrium, how much deadweight loss would be created? _____
- iii. The difference between producer's surplus as a simple monopolist and producer's surplus if the price was set at the competitive equilibrium is: _____
- iv. Suppose the firm could perfectly price discriminate. The difference between consumer surplus under a simple monopoly scenario and consumer's surplus under the perfect price discriminating monopoly scenario is: _____
- iv. Suppose the firm could sell some of its product in a different city for the competitive market price. Should the firm sell more or less than Q_m in its local market? Label the new quantity Q_n on the graph above.

3. Chapter 12, Problem Set #s 1-5.

4. Multiple Choice

- i. A simple monopoly will maximize its profit by producing the quantity where
 - a. price and marginal cost are equal.
 - b. the demand curve crosses the average cost curve.
 - c. marginal cost reaches its minimum.
 - d. marginal revenue equals marginal cost.

- ii. A natural monopoly exists when a firm
 - a. owns all of the world's known reserves of a natural resource.
 - b. has an average cost curve that is decreasing at the point where it crosses demand.
 - c. has obtained a patent on a new genetically modified organism.
 - d. is able to practice price discrimination in the sale of a natural resource.

- iii. When first-degree price discrimination is perfectly implemented
 - a. social gain is maximized, with all gains going to the monopoly.
 - b. consumers' surplus and producer's surplus are both larger than in the case of simple monopoly.
 - c. the resulting deadweight loss is larger than if the monopoly did not price discriminate.
 - d. the consumers' and producer's gains from trade are identical to those in a competitive market.

- iv. In order to practice *any form* of price discrimination, a monopoly must be able to
 - a. identify the maximum price that each customer is willing to pay.
 - b. separate its customers into distinct groups.
 - c. prevent resale of its product.
 - d. establish a legal barrier to entry.

- v. Second-degree price discrimination generally takes the form of
 - a. special prices for students and seniors.
 - b. membership clubs.
 - c. quantity discounts.
 - d. "extras" like free delivery and free customer service.

- vi. The initial holdings of an individual in an Edgeworth box is referred to as
 - a. the contract point.
 - b. the endowment point.
 - c. the Pareto preferred point.
 - d. the competitive equilibrium point.

- vii. In an Edgeworth box, a point where two indifference curves are tangent represents
 - a. the initial endowment point.
 - b. an allocation that both consumers prefer to the initial endowment.
 - c. a competitive equilibrium.
 - d. a Pareto-optimal allocation of goods.

- viii. Analysis of an Edgeworth box economy shows that a competitive equilibrium
 - a. must be Pareto optimal.
 - b. can be located anywhere along the contract curve.
 - c. may lie anywhere within the region of mutual advantage.
 - d. must lie to the southeast of the endowment point.