



Semester: 1/2011
EE 311 Microeconomic Theory

Exercise 7: Monopoly

1. A monopolist faces the demand curve $P = 11 - Q$ where P is measured in Baht per unit and Q in thousands of units. The monopolist has a constant average cost of 6 Baht per unit. Find the profit-maximising price and quantity and the resulting profit.
2. Determine the profit-maximising price when the monopolist has a marginal cost of 25 Baht and a price elasticity of demand of -3.
3. A monopolist sells his product in two distinct markets. The cost and demand curves are given by the following equations:

$$\begin{aligned} TC &= Q^2 + 10Q \\ Q_1 &= 32 - 0.4P_1 \\ Q_2 &= 18 - 0.1P_2 \end{aligned}$$

- (a) The firm is able to practice price discrimination between the two markets. Calculate the profit-maximising levels of price and quantity in each market, and the monopolist's total pure profit.
 - (b) If price discrimination is prohibited and he must charge the same price in both markets, calculate the profit-maximising values for price, output and total profit and compare your answer to (a).
4. The market demand curve is $Q = 1,800 - 200P$. The industry exhibits constant long run average cost at all levels of output, regardless of the market structure. Long run average cost is constant at 1.50 Baht per unit of output.

Calculate market output, price (if applicable), consumer surplus, and profit for each scenario below. Compare the effect on society's welfare of each possibility.

- (a) Perfect competition.
 - (b) Simple monopoly.
 - (c) First degree price discrimination.
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