

HOMEWORKS
MICRO THEORY ECON 3352
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Note: Exercise numbers are based on Pindyck and Rubinfeld's *Microeconomics* 6th edition.

MONOPOLY

CHAPTER 10

QUESTIONS FOR REVIEW

1. A monopolist is producing at a point at which marginal cost exceeds marginal revenue. How should it adjust its output to increase profit?
2. We write the percentage markup of prices over marginal cost as $(P - MC)/P$. For a profit-maximizing monopolist, how does this markup depend on the elasticity of demand? Why can this markup be viewed as a measure of monopoly power?

EXERCISES

4. A firm faces the following average revenue (demand) curve:

$$P = 120 - 0.02Q,$$

where Q is weekly production and P is price, measured in cents per unit. The firm's cost function is given by $C = 60Q + 25,000$. Assume that the firm maximizes profits.

- a. What is the level of production, price, and total profit per week?
7. Suppose a profit-maximizing monopolist is producing 800 units of output and is charging a price of \$40 per unit.
- a. If the elasticity of demand for the product is -2 , find the marginal cost of the last unit produced.
 - b. What is the firm's percentage markup of price over marginal cost?
 - c. Suppose that the average cost of the last unit produced is \$15 and the fixed cost is \$2000. Find the firm's profit.

MONOPOLISTIC COMPETITION AND OLIGOPOLY

CHAPTER 12

QUESTIONS FOR REVIEW

1. What are the characteristics of a monopolistically competitive market? What happens to the equilibrium price and quantity in such a market if one firm introduces a new, improved product?
2. Suppose a monopolistically competitive firm is making a profit in the short run. What will happen to its demand curve in the long run?

EXERCISES

10. Two firms produce luxury sheepskin auto seat covers, Western Where (WW) and B.B.B. Sheep (BBBS). Each firm has a cost function given by:

$$C(q) = 30q + 1.5q^2$$

The market demand for these seat covers is represented by the inverse demand equation:

$$P = 300 - 3Q,$$

where $Q = q_1 + q_2$, total output.

- a. If each firm acts to maximize its profits, taking its rival's output as given (i.e., the firms behave as Cournot oligopolists), what will be the equilibrium quantities selected by each firm? What is total output, and what is the market price? What are the profits for each firm?
- b. It occurs to the managers of WW and BBBS that they could do a lot better by colluding. If the two firms collude, what would be the profit-maximizing choice of output? The industry price? The output and the profit for each firm in this case?