Self-Check Questions

Q1

Classify the following as a government-enforced barrier to entry, a barrier to entry that is not government-enforced, or a situation that does not involve a barrier to entry.

- a. A patented invention
- b. A popular but easily copied restaurant recipe
- c. An industry where economies of scale are very small compared to the size of demand in the market
- d. A well-established reputation for slashing prices in response to new entry
- e. A well-respected brand name that has been carefully built up over many years
Q2

Classify the following as a government-enforced barrier to entry, a barrier to entry that is not government-enforced, or a situation that does not involve a barrier to entry.

a. A city passes a law on how many licenses it will issue for taxicabs
b. A city passes a law that all taxicab drivers must pass a driving safety test and have insurance
c. A well-known trademark
d. Owning a spring that offers very pure water
e. An industry where economies of scale are very large compared to the size of demand in the market

Q3

Suppose the local electrical utility, a legal monopoly based on economies of scale, was split into four firms of equal size, with the idea that eliminating the monopoly would promote competitive pricing of electricity. What do you anticipate would happen to prices?

Q4

If Congress reduced the period of patent protection from $20$ years to $10$ years, what would likely happen to the amount of private research and development?

Review Questions

Q5

How is monopoly different from perfect competition?

Q6

What is a barrier to entry? Give some examples.

Q7

What is a natural monopoly?
Q8
What is a legal monopoly?

Q9
What are diminishing marginal returns?

Q10
What is predatory pricing?

Q11
How is intellectual property different from other property?

Q12
By what legal mechanisms is intellectual property protected?

Q13
In what sense is a natural monopoly "natural"?

Critical Thinking Questions

Q14
ALCOA does not have the monopoly power it once had. How do you suppose their barriers to entry were weakened?

Q15
Why are generic pharmaceuticals significantly cheaper than name brand ones?

Q16
For many years, the Justice Department has tried to break up large firms like IBM, Microsoft, and most recently Google, on the grounds that their large market share made them essentially monopolies. In a global market, where U.S. firms
compete with firms from other countries, would this policy make the same sense as it might in a purely domestic context?

Q17

Intellectual property laws are intended to promote innovation, but some economists, such as Milton Friedman, have argued that such laws are not desirable. In the United States, there is no intellectual property protection for food recipes or for fashion designs. Considering the state of these two industries, and bearing in mind the discussion of the inefficiency of monopolies, can you think of any reasons why intellectual property laws might hinder innovation in some cases?

Problems

Q18

Return to Figure 9.1.1. Suppose \( P_0 \) is \( \$10 \) and \( P_1 \) is \( \$11 \). Suppose a new firm with the same \( LRAC \) curve as the incumbent tries to break into the market by selling \( 4,000 \) units of output. Estimate from the graph what the new firm's average cost of producing output would be. If the incumbent continues to produce \( 6,000 \) units, how much output would be supplied to the market by the two firms? Estimate what would happen to the market price as a result of the supply of both the incumbent firm and the new entrant. Approximately how much profit would each firm earn?

Solution

S1

a. A patent is a government-enforced barrier to entry.
b. This is not a barrier to entry.
c. This is not a barrier to entry.
d. This is a barrier to entry, but it is not government-enforced.
e. This is a barrier to entry, but it is not directly government enforced.

S2

a. This is a government-enforced barrier to entry.
b. This is an example of a government law, but perhaps it is not much of a barrier to entry if most people can pass the safety test and get insurance.
c. Trademarks are enforced by government, and therefore are a barrier to entry.
d. This is probably not a barrier to entry, since there are a number of different ways of getting pure water.
e. This is a barrier to entry, but it is not government-enforced.

S3

Because of economies of scale, each firm would produce at a higher average cost than before. (They would each have
to build their own power lines.) As a result, they would each have to raise prices to cover their higher costs. The policy
would fail.

S4

Shorter patent protection would make innovation less lucrative, so the amount of research and development would likely
decline.

9.2: How a Profit-Maximizing Monopoly Chooses Output and Price

Self-Check Questions

Q1

Suppose demand for a monopoly’s product falls so that its profit-maximizing price is below average variable cost. How
much output should the firm supply? *Hint:* Draw the graph.

Q2

Imagine a monopolist could charge a different price to every customer based on how much he or she were willing to
pay. How would this affect monopoly profits?

Review Questions

Q3

How is the demand curve perceived by a perfectly competitive firm different from the demand curve perceived by a
monopolist?
Q4
How does the demand curve perceived by a monopolist compare with the market demand curve?

Q5
Is a monopolist a price taker? Explain briefly.

Q6
What is the usual shape of a total revenue curve for a monopolist? Why?

Q7
What is the usual shape of a marginal revenue curve for a monopolist? Why?

Q8
How can a monopolist identify the profit-maximizing level of output if it knows its total revenue and total cost curves?

Q9
How can a monopolist identify the profit-maximizing level of output if it knows its marginal revenue and marginal costs?

Q10
When a monopolist identifies its profit-maximizing quantity of output, how does it decide what price to charge?

Q11
Is a monopolist allocatively efficient? Why or why not?

Q12
How does the quantity produced and price charged by a monopolist compare to that of a perfectly competitive firm?
Q13

Imagine that you are managing a small firm and thinking about entering the market of a monopolist. The monopolist is currently charging a high price, and you have calculated that you can make a nice profit charging 10% less than the monopolist. Before you go ahead and challenge the monopolist, what possibility should you consider for how the monopolist might react?

Q14

If a monopoly firm is earning profits, how much would you expect these profits to be diminished by entry in the long run?

Problems

Q15

Draw the demand curve, marginal revenue, and marginal cost curves from Figure 9.2.4, and identify the quantity of output the monopoly wishes to supply and the price it will charge. Suppose demand for the monopoly’s product increases dramatically. Draw the new demand curve. What happens to the marginal revenue as a result of the increase in demand? What happens to the marginal cost curve? Identify the new profit-maximizing quantity and price. Does the answer make sense to you?

Q16

Draw a monopolist’s demand curve, marginal revenue, and marginal cost curves. Identify the monopolist’s profit-maximizing output level. Now, think about a slightly higher level of output (say \(Q_0 + 1\)). According to the graph, is there any consumer willing to pay more than the marginal cost of that new level of output? If so, what does this mean?

Solution

S1

If price falls below \(AVC\), the firm will not be able to earn enough revenues even to cover its variable costs. In such a case, it will suffer a smaller loss if it shuts down and produces no output. By contrast, if it stayed in operation and produced the level of output where \(MR = MC\), it would lose all of its fixed costs plus some variable costs. If it shuts down, it only loses its fixed costs.
This scenario is called “perfect price discrimination.” The result would be that the monopolist would produce more output, the same amount in fact as would be produced by a perfectly competitive industry. However, there would be no consumer surplus since each buyer is paying exactly what they think the product is worth. Therefore, the monopolist would be earning the maximum possible profits.

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