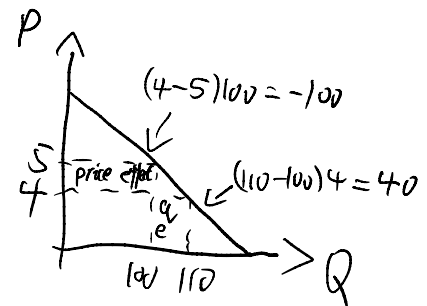


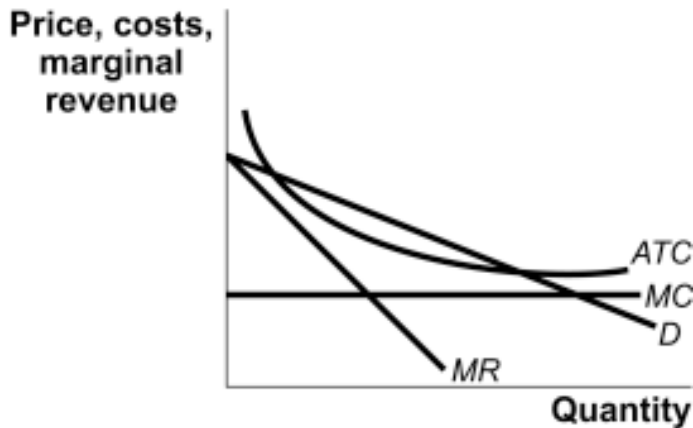
Chapter 13 Assignment

- Market structures are categorized by the following two criteria:
 - the number of firms and the size of the firms.
 - whether or not products are differentiated and the extent of advertising.
 - ☒ the number of firms and whether products are differentiated.
 - ☒ the size of the firms and the extent of advertising.
- The following are four differences between monopoly and perfect competition. Which of these is INCORRECT?
 - A monopolist has market power while a perfect competitor does not.
 - Unlike a perfectly competitive firm, a monopoly can make positive economic profits in the long run.
 - A monopoly will charge a higher price and produce a smaller quantity than a competitive market with the same demand and cost structure.
 - ☒ Monopoly profits can continue to exist in the long run, because the monopoly produces more and charges a higher price than a comparable perfectly competitive industry.
- Microsoft and its operating system are often cited as an example of a company that grew into a monopolist through:
 - ownership of a resource.
 - ☒ patents.
 - network externalities.
 - large economies of scale.
- After the first unit sold, the marginal revenue a monopolist receives from selling one more unit of a good is less than the price at which that unit is sold, because of:
 - diminishing marginal returns.
 - increasing marginal cost.
 - ☒ a downward-sloping demand curve.
 - ☒ all of the above.
- Mrs. Scheffler sells 100 bottles of beer per week at a price of \$5 per bottle. She can sell 110 bottles per week if she lowers the price to \$4 per bottle. The quantity and the price effects on total revenue would be, respectively:
 - an increase of \$440 and a decrease of \$100.
 - an increase of \$40 and a decrease of \$550.
 - an increase of 10 bottles and a decrease of \$100.
 - ☒ an increase of \$40 and a decrease of \$100.
- Compared to a perfectly competitive industry, a monopolist:
 - produces a large quantity.
 - ☒ charges a higher price.
 - increases consumer surplus.
 - does all of the above.
- Suppose a monopoly is producing at the profit-maximizing level of output. At that level of output:
 - ☒ marginal revenue equals marginal cost.
 - marginal revenue is greater than marginal cost.
 - marginal revenue is less than marginal cost.
 - price is less than marginal cost.



Use the following to answer question 8.

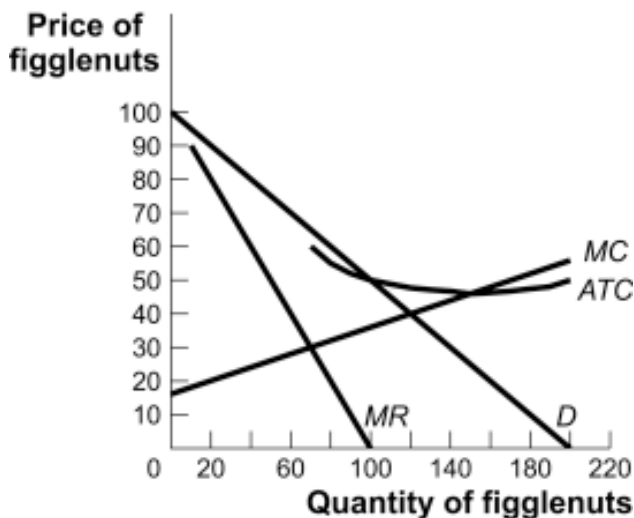
Figure: Total Surplus with a Regulated Natural Monopolist



8. (Figure: Total Surplus with a Regulated Natural Monopolist) In the accompanying figure, the natural monopoly:
- A) would incur an economic loss if regulated to produce where price equals marginal cost.
 - B) would incur an economic profit if regulated to charge a price equal to average total cost.
 - C) creates more consumer surplus if regulated to produce either where price equals marginal cost or price equals average total cost.
 - D) Both a and c are correct.

Use the following to answer questions 9-10.

Figure: Demand, Revenue, and Cost Curves



9. (Figure: Demand, Revenue, and Cost Curves) The accompanying figure shows the demand, marginal revenue, marginal cost, and average total cost curves for Figglenuts-R-Us, a monopolist in the figglenut market. If the government wanted to regulate Figglenuts-R-Us such that it would minimize the deadweight loss while allowing the firm to break-even, it would impose a price ceiling of _____ in the market.
- A) \$40
 - B) \$46
 - C) \$50
 - D) \$65

10. (Figure: Demand, Revenue, and Cost Curves) The accompanying figure shows the demand, marginal revenue, marginal cost, and average total cost curves for Figglenuts-R-Us, a monopolist in the figglenut market. Figglenuts-R-Us will sell _____ figglenuts and set a price of _____ to maximize profits.
- A) 70; \$65
 - B) 100; \$50
 - C) 120; \$40
 - D) 150; \$46
11. The main reason a monopoly engages in price discrimination is that:
- A) it wants to discriminate against a particular ethnic group.
 - B) doing so increases its profits.
 - C) it wants to discourage potential competitors.
 - D) by charging a lower price to some people, it may succeed in discouraging efforts to regulate it.
12. If a monopolist can engage in perfect price discrimination, then:
- A) it produces at the socially efficient level.
 - B) consumer surplus is reduced to zero.
 - C) each consumer is charged the highest price that he or she is willing to pay.
 - D) all of the above are true.
13. If a monopolist can engage in perfect price discrimination, then which of the following will NOT happen?
- A) It produces at the socially efficient level.
 - B) Consumer surplus is reduced to of what it was.
 - C) Each consumer is charged the highest price that he or she is willing to pay.
 - D) Some consumers pay prices that approach marginal cost.
14. A Japanese steel firm sells steel in Canada and in Japan. Since Canada buys steel from a number of different sources, the Canadian demand for Japanese steel is more price-elastic than the Japanese demand for Japanese steel. If the Japanese steel firm wishes to maximize its profits:
- A) it should charge the same price in both countries (after adjusting for transportation costs).
 - B) it should charge a higher price in Canada and a lower price in Japan; otherwise it would be accused of unfair trade practices.
 - C) it should charge a lower price in Canada and a higher price in Japan.
 - D) it should figure out which market is more profitable and sell only in that market.

15. Are monopolists *price takers*? Explain why or why not.

16. What is necessary in order for a monopolist to continue to exist in a market?
Briefly describe four examples.

17. If a monopolist wants to increase their total revenue by selling more, what will have to happen to the price? (Increase or decrease)
18. By selling more and changing the price according to your answer in (17), total revenue will increase as long as demand is _____ (elastic, inelastic, or unit elastic).
19. Suppose demand is $P = 10 - 0.1Q$. The monopolist is currently charging a price of \$8, but they are considering lowering the price to \$6.
- A) Graph the demand curve and calculate the quantity demanded at $P = \$8$ and $P = \$6$.



- B) Calculate the *price effect* and the *quantity effect* of the price change.

Price effect = _____

Quantity effect = _____

- C) Calculate the change in total revenue.

$TR_1 =$ _____

$TR_2 =$ _____

$\Delta TR =$ _____

- D) Between \$8 and \$6 is demand elastic, inelastic, or unit elastic?

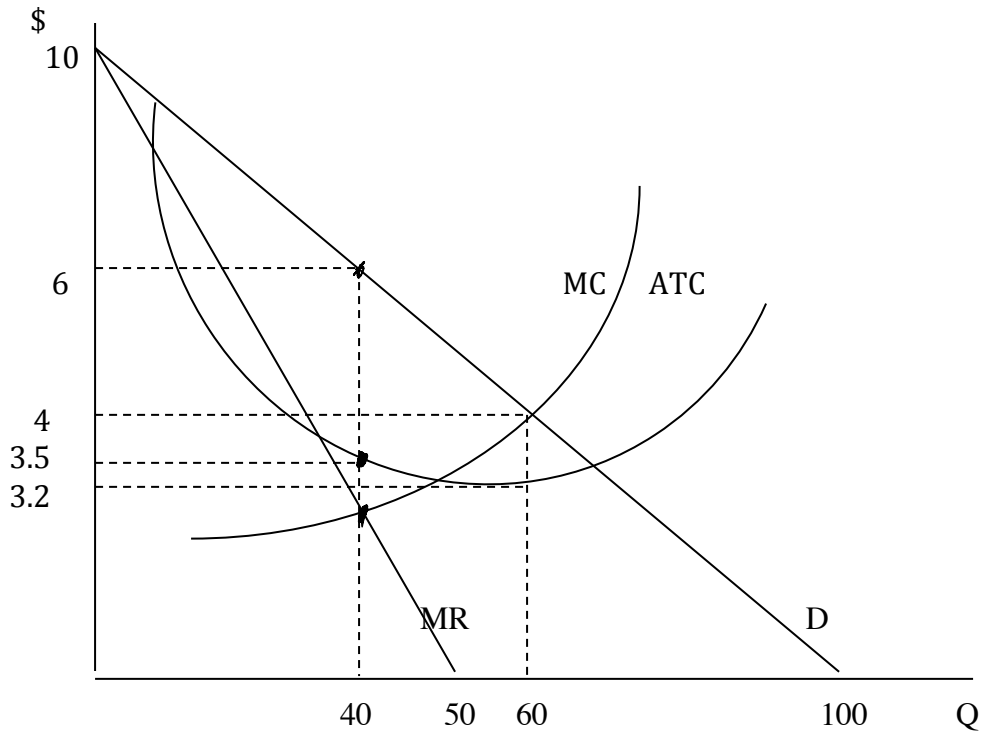
- E) Derive the *function* for marginal revenue. $P =$ _____

20. What is the difference between a *price taker's* ability to earn a profit in the long run and a *monopolist's* ability to earn a profit in the long run? What is the reason for this difference?

21. Why are monopolies *inefficient* compared to perfectly competitive markets?

22. How is a *natural monopoly* different from a regular monopoly?

23. Below is an illustration of a monopoly:



A) What quantity will the monopolist produce, and what price will they charge consumers?

Marginal revenue = Marginal cost

$$Q_M = \underline{40}$$

$$P_M = \underline{6}$$

i. Calculate consumer surplus and profit.

$$CS = \underline{80}$$

$$\text{Profit} = \underline{100}$$

ii. Is this profit sustainable in the long run? Yes

B) If this firm were in a perfectly competitive market instead, what quantity would they produce and what price would they charge consumers?

$$Q^* = \underline{60}$$

$$P^* = \underline{4}$$

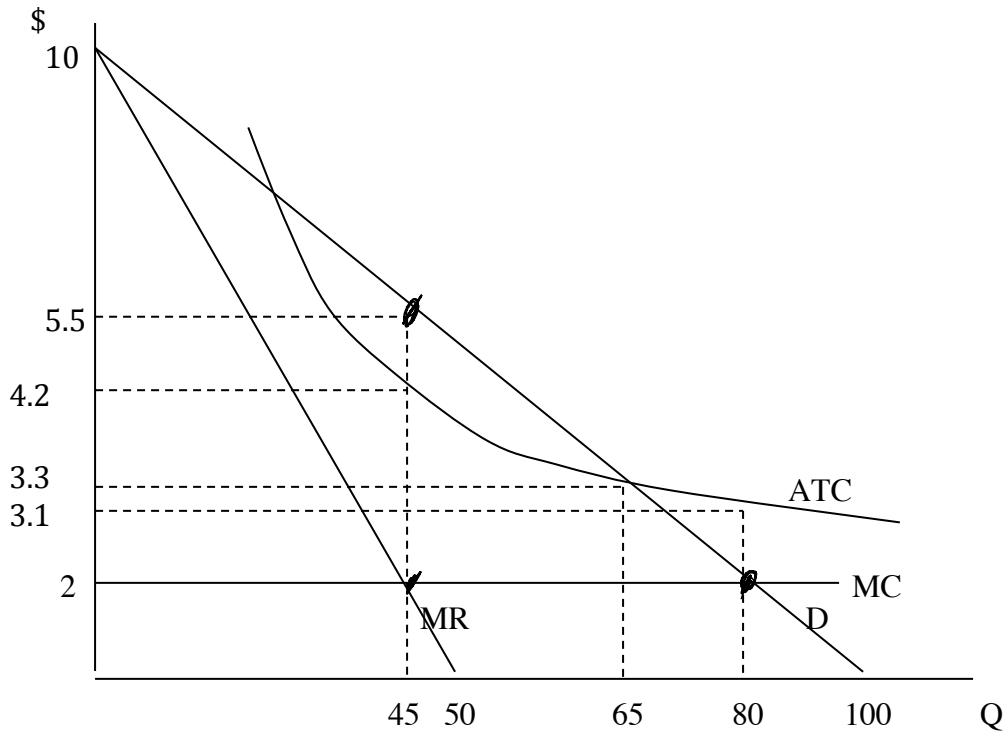
i. Calculate consumer surplus and profit.

$$CS = \underline{180}$$

$$\text{Profit} = \underline{48}$$

ii. Is this profit sustainable in the long run? No

24. Below is an illustration of a *natural* monopoly:



A) What quantity will the monopolist produce, and what price will they charge consumers?

$$Q_M = \underline{45}$$

$$P_M = \underline{5.5}$$

i. Calculate consumer surplus, profit, and deadweight loss.

$$CS = \underline{\hspace{2cm}}$$

$$\text{Profit} = \underline{\hspace{2cm}}$$

$$DWL = \underline{61.25}$$

B) If the government forces the monopolist to produce the efficient quantity, what would be the loss to the monopolist?

$$\text{Loss} = \underline{\hspace{2cm}}$$

i. Calculate consumer surplus, profit, and deadweight loss.

$$CS = \underline{\hspace{2cm}}$$

$$\text{Profit} = \underline{\hspace{2cm}}$$

$$DWL = \underline{0}$$

- C) If the government *regulates* the monopolist and forces the monopolist to produce the quantity at which $P = ATC$, what quantity will the monopolist produce, and what price will they charge consumers?

$$Q_R = \underline{\hspace{2cm}}$$

$$P_R = \underline{\hspace{2cm}}$$

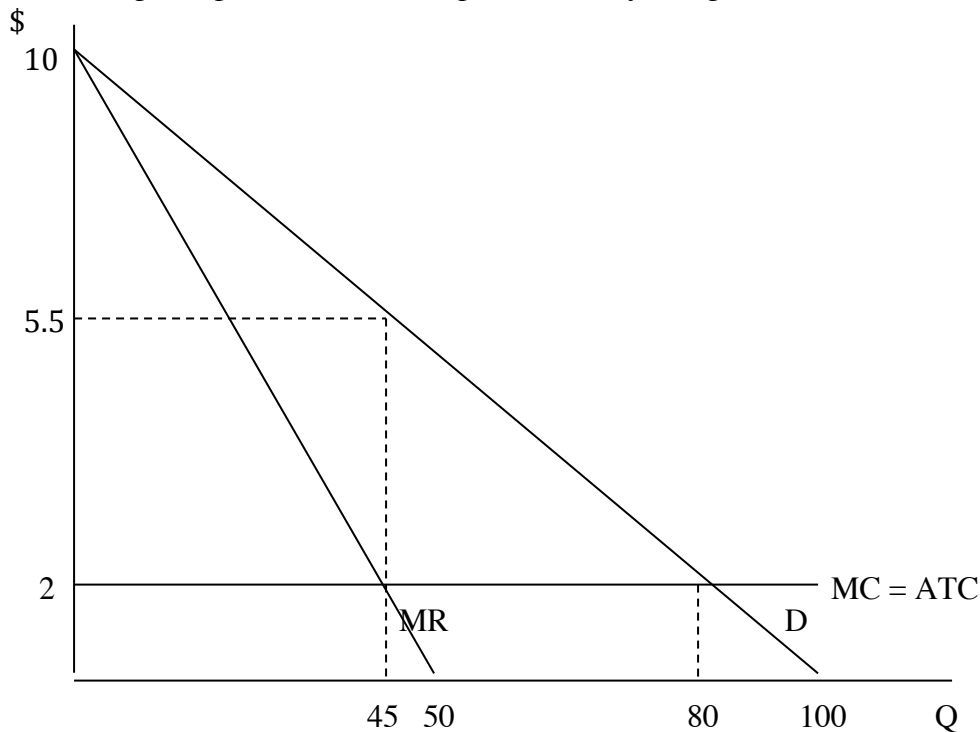
- i. Calculate consumer surplus, profit, and deadweight loss.

$$CS = \underline{\hspace{2cm}}$$

$$\text{Profit} = \underline{\hspace{2cm}}$$

$$DWL = \underline{\hspace{2cm}}$$

25. Now suppose that $MC = ATC$ for the monopolist. If the monopolist is *unregulated* and is practicing *perfect price discrimination*, what quantity will the monopolist produce, and what price will they charge consumers?



$$Q = \underline{\hspace{2cm}}$$

$$P = \underline{\hspace{2cm}}$$

(explain)

- i. Calculate consumer surplus, profit, and deadweight loss.

$$CS = \underline{\hspace{2cm}}$$

$$\text{Profit} = \underline{\hspace{2cm}}$$

$$DWL = \underline{\hspace{2cm}}$$