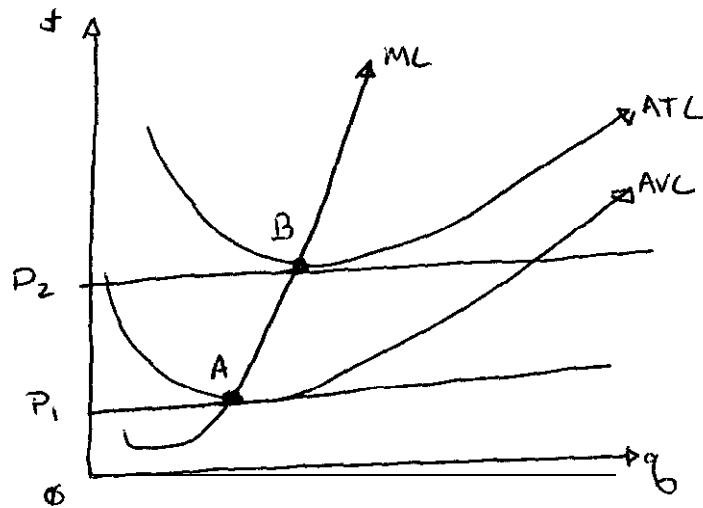


Chp 25- Monopoly

Pg 1

In the previous chapter, we examined the competitive ideal, that is, pure competition in which a large number of firms engaged in competition to sell a homogenous product. Using the tools we developed in Chp 23, we ascertained that the short-run operating rules for purely competitive firms are:



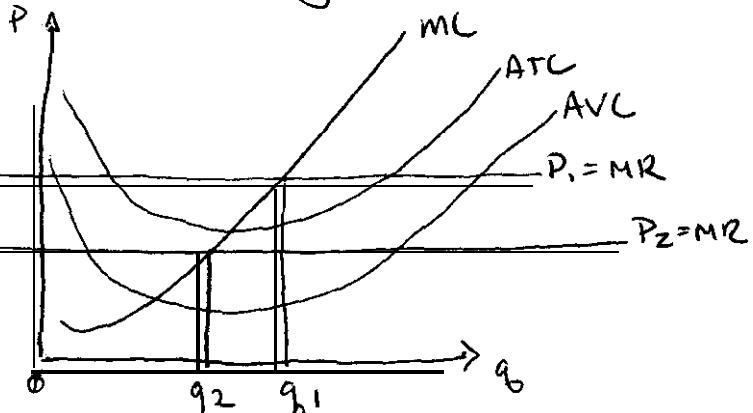
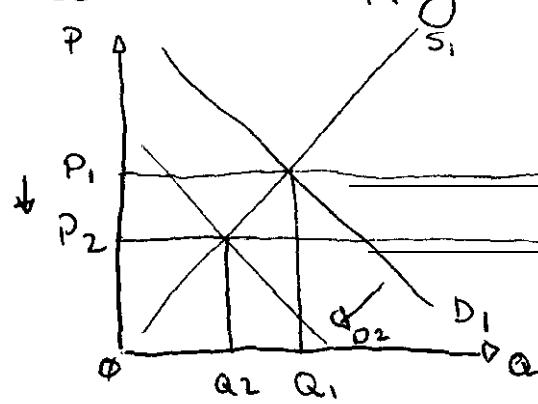
If $P_m < P_1$, then purely competitive firms shut down since they can not cover variable costs

If $P_1 \leq P_m < P_2$, then the firm operates at a loss. The firm covers variable costs and a portion of fixed costs.

If $P_m = P_2$, then the firm operates and earns normal accounting profits, but economic profits are equal to zero

If $P_m > P_2$, then the firm earns accounting and economic profits

From this, we noted that the purely competitive firm's short-run supply curve is merely the portion of MC curve above the minimum point on the AVC curve, or the segment AB \rightarrow . We also examined the interaction between market demand and supply and a firm's profitability.



Chp 25 - Monopoly

Pg 2

We now turn to the other end of the spectrum of firms, from an industry with many sellers to an industry with one seller, that is, a monopoly.

Def: A monopoly is a firm that is the lone producer of a good for which there are no close substitutes.

Examples of monopolies: public utilities, Microsoft (perhaps)

Intel, Debeers, → discuss

→ Monopolistic firms enjoy true market power, that is, they are able to change price and quantity to maximize revenue. Since, by definition, monopolists have no effective competition and sell a product with no effective substitutes, they can exercise market power to meet their objectives.

↳ note: effective denotes that competitors and substitutes may exist but they are marginal players relative to the monopolist

↳ LINUX vs Windows NT

↳ COREL vs Microsoft

Before we examine this facet of the monopolistic firm, let us digress for a moment to reexamine the relationship between Demand, Price, Marginal Revenue, Total Revenue and elasticity of demand (ed)

In general, we developed the following rules

If $ed < 1$

lowering P lowers TR

increasing P increases TR

If $ed > 1$

lowering P increases TR
increases P lowers TR

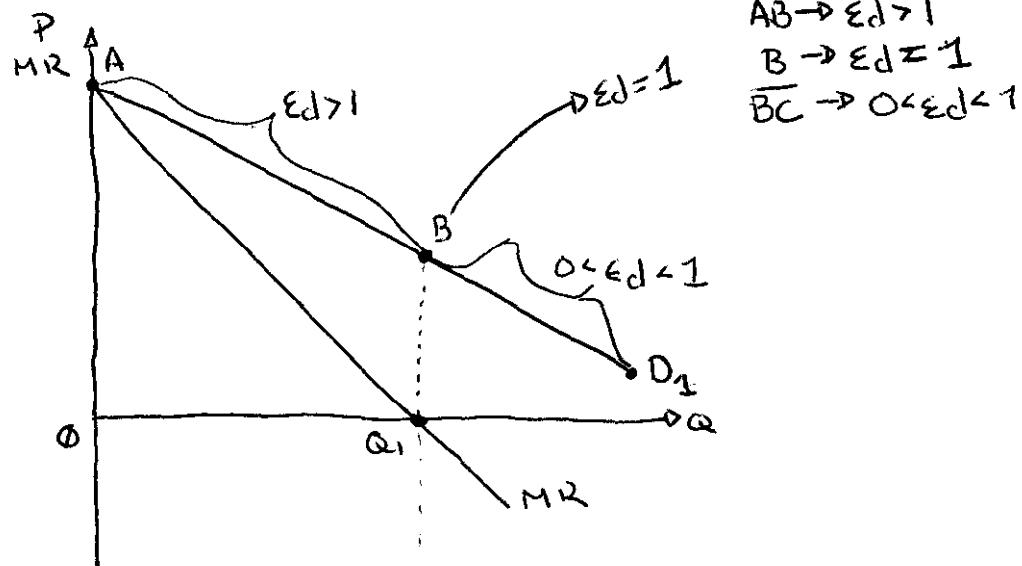
If $ed = 1$

TR maximized

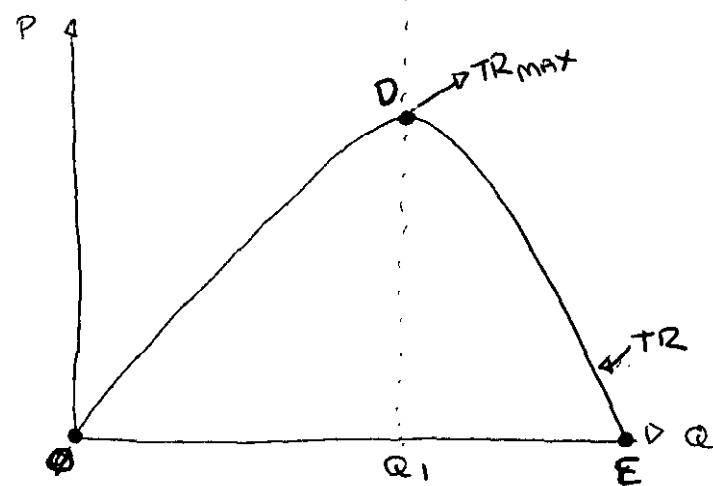
lowering P or increasing P → lowers TR

Chp 25 - Monopoly

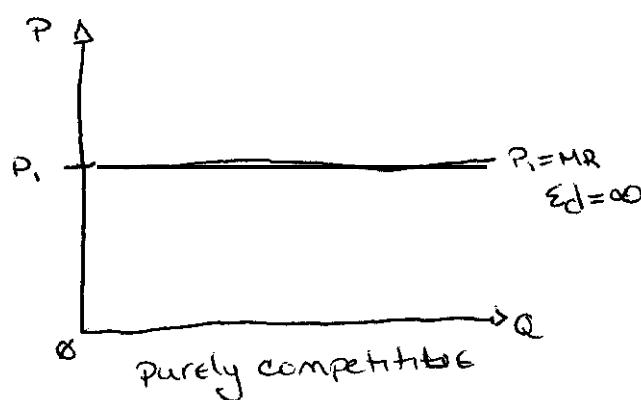
Pg 3



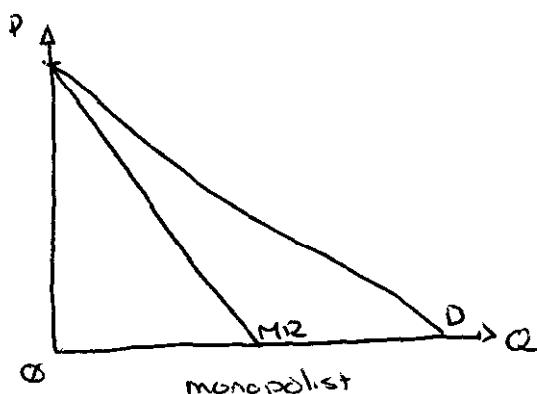
$$\begin{aligned}\overline{OD} &\rightarrow MR > 0 \\ D &\rightarrow MR = 0 \\ \overline{DE} &\rightarrow MR < 0\end{aligned}$$



Returning to our discussion of monopoly, we can use the above illustration to discuss the difference between a purely competitive and monopolistic firm:



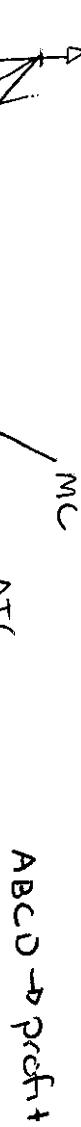
1. price taker
2. $\epsilon_d = \infty$
3. $MR = P$
4. TR is dependent on P & Q



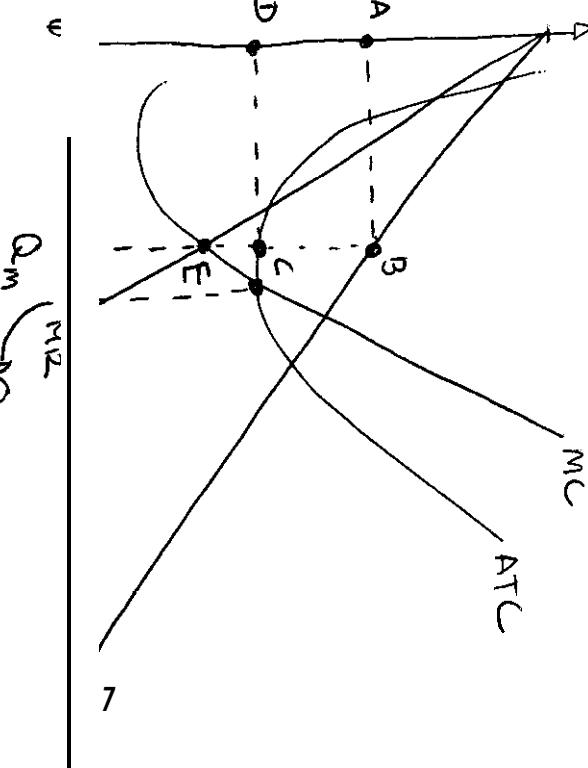
1. price maker
2. ϵ_d changes along demand curve
3. $MR = \frac{1}{2} P$
4. TR is dependent upon P and Q

Chp 25 - Monopoly
Pg 4

Case 1 : Profit-Maximizing Monopolist



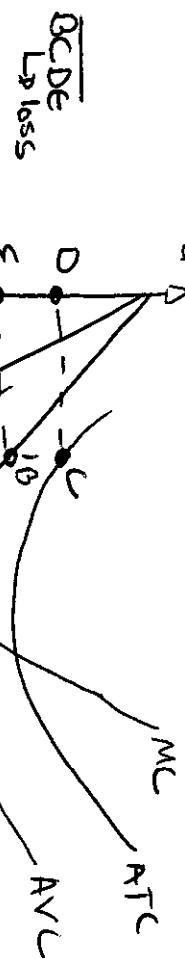
ABC D \rightarrow profit



Case 2: Loss-Minimizing Monopolist

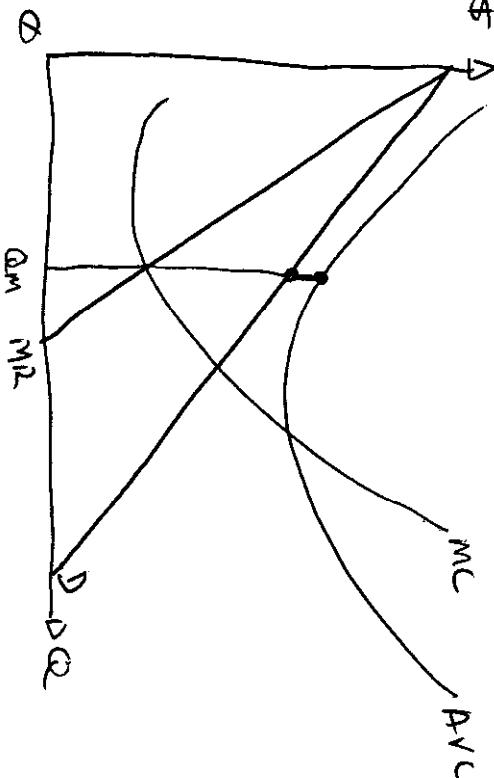
Δ

Δ Q_m \rightarrow Q_c competitive



Case 3: Shut-Down

If monopolist can not cover variable costs, then shut down.



Chp 25 - Monopoly

Pg 5

In the long-run, however, the equilibrium condition is not as clear as with respect to the purely competitive firm.

First, what barriers to entry exist?

This is an extremely important question in that if the current barriers to entry are not sustainable, the monopolistic firm may not be able to sustain its monopoly in the long-run.

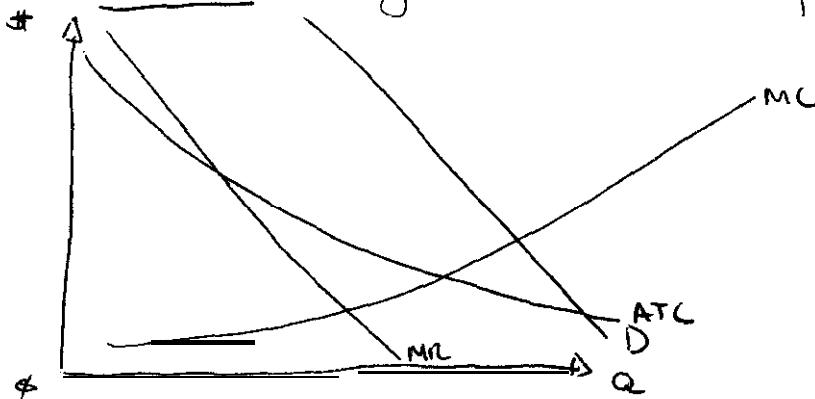
↳ For example, Microsoft is currently enjoying a position in the personal computing software market that is akin to a monopolist. Over 90% of PCs operate using Windows OS.

Now, this is a large strategic barrier to entry; that is, any firm wishing to compete w/ Microsoft in the OS/OEM market would have to overcome the market power of Microsoft.

↳ However, the position is sustainable only as long as MSFT is able to innovate and maintain its market share.

↳ On the other hand, some firms enjoy regulatory barriers to entry. A firm holding a drug patent, for example, has a legal monopoly on the production of the drug until the patent expires.

↳ Finally, some industries face natural barriers to entry, where the economies of scale are so large that average costs decline throughout the scale of production.

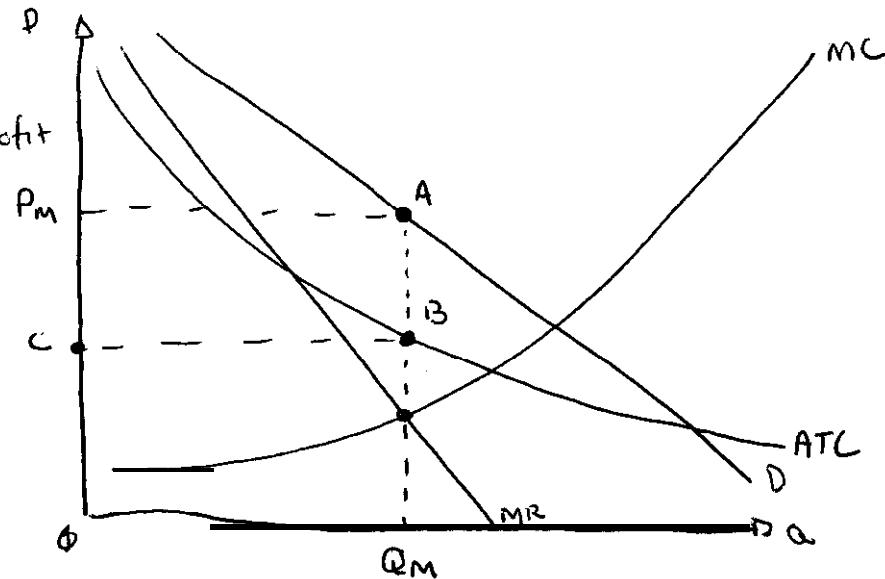


Chp 25 - Monopoly

Pg 6

P_m = Monopolist Price

$P_m A B C$ = Monopolist Profit



→ In such an industry, competition will not occur since competition will result in unsustainable losses, however, letting the monopolist charge P_m is inefficient so govt intervention may be necessary.

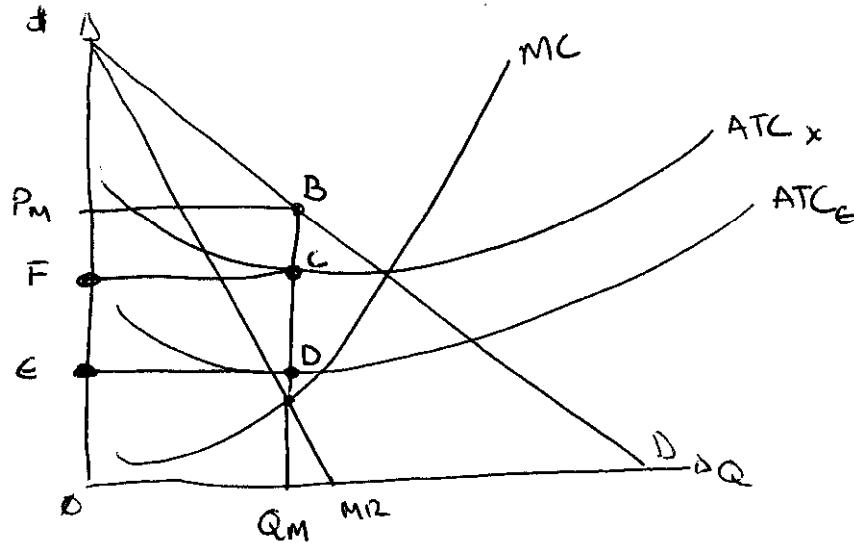
X-efficiency

Assume that a monopolist enjoys the protection of sustainable barriers to entry, thus they do not have to innovate or operate efficiently.

↳ Bell Telephone before breakup

↳ Standard Oil

X-efficiency are the excessive costs incurred because monopolistic firms do not face competitive pressures



$P_m BCF$ → profit by x-inefficient firm

$P_m BDE$ → profit by efficient firm

FCE → losses caused by x-inefficiency

Chp 25 - Monopoly

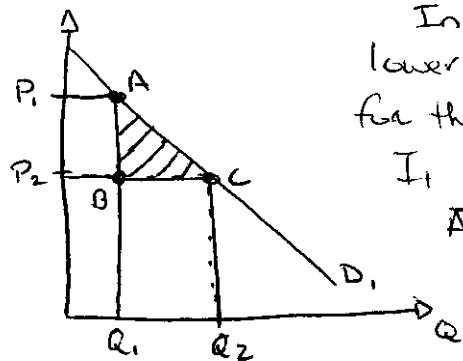
Pg 7

We now conclude our discussion of monopoly with an examination of the concept of price discrimination.

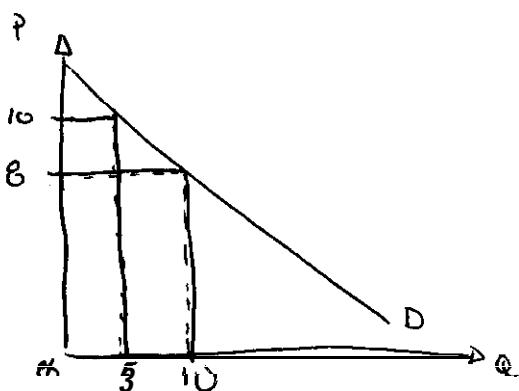
Def: Price discrimination occurs when a good is sold at different prices that do not reflect differences in production costs.

First, to engage in price discrimination, a firm must have sufficient market power and the ability to prevent arbitrage. If arbitrage is possible, then attempts at price discrimination will ultimately fail.

Price discrimination is the ability of the firm to charge different consumers different prices.

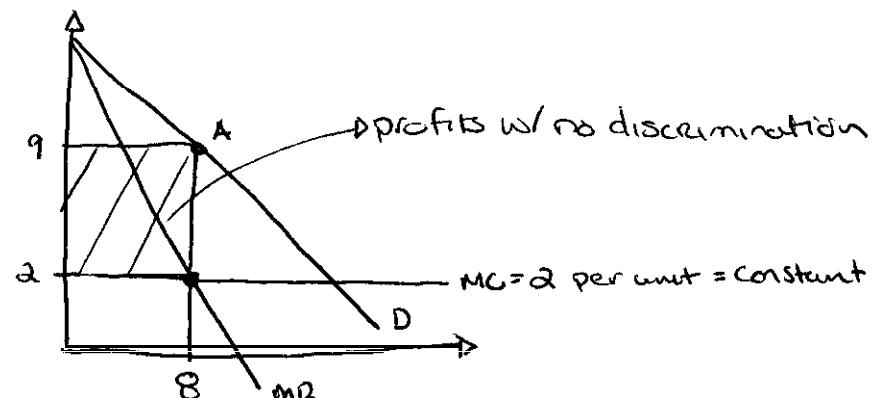


In the market w/o price discrimination, a firm must lower its price to increase Q_d . It cannot charge P_1 for the first Q_1 of goods and P_2 for the remaining goods. It has to charge P_2 for Q_2 of goods. The triangle ABC represents the benefit, or consumers surplus, to consumers due to this fact.

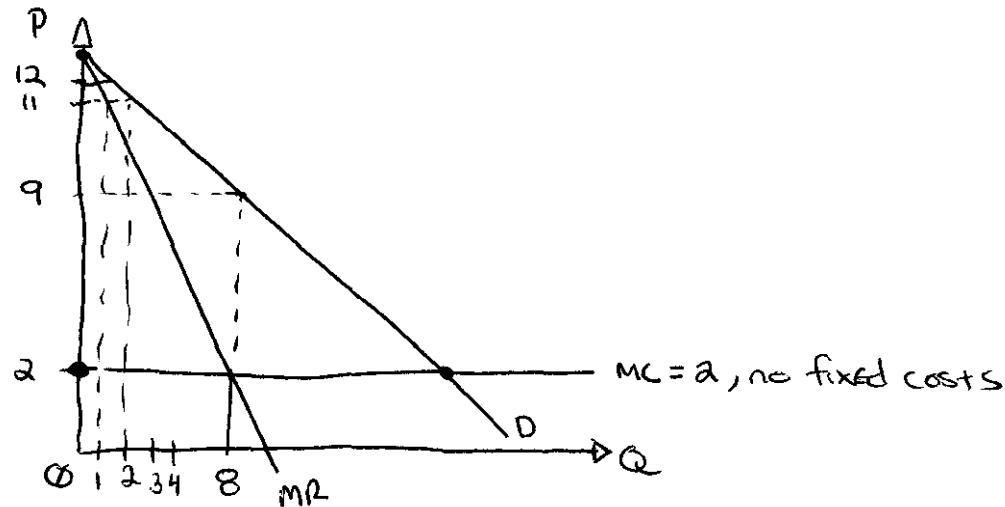


$$\text{At } P=10, TR=50 \\ P=8, TR=80$$

No discrimination
competitive firms



$$P=9, Q=8, TR=72 - 16 = 56$$



w/ price discrimination the monopolist can charge incrementally, say

- \$12 for the first unit
- \$11 for the second unit
- \$10.50 for the third
- \$10.25 for the fourth and so on

w/ perfect price discrimination the firm is able to expropriate consumer surplus so that the entire area above MC is profit