Lecture 8:
Market

- Perfect Competition
- Monopoly

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Perfect Competition: Assumptions

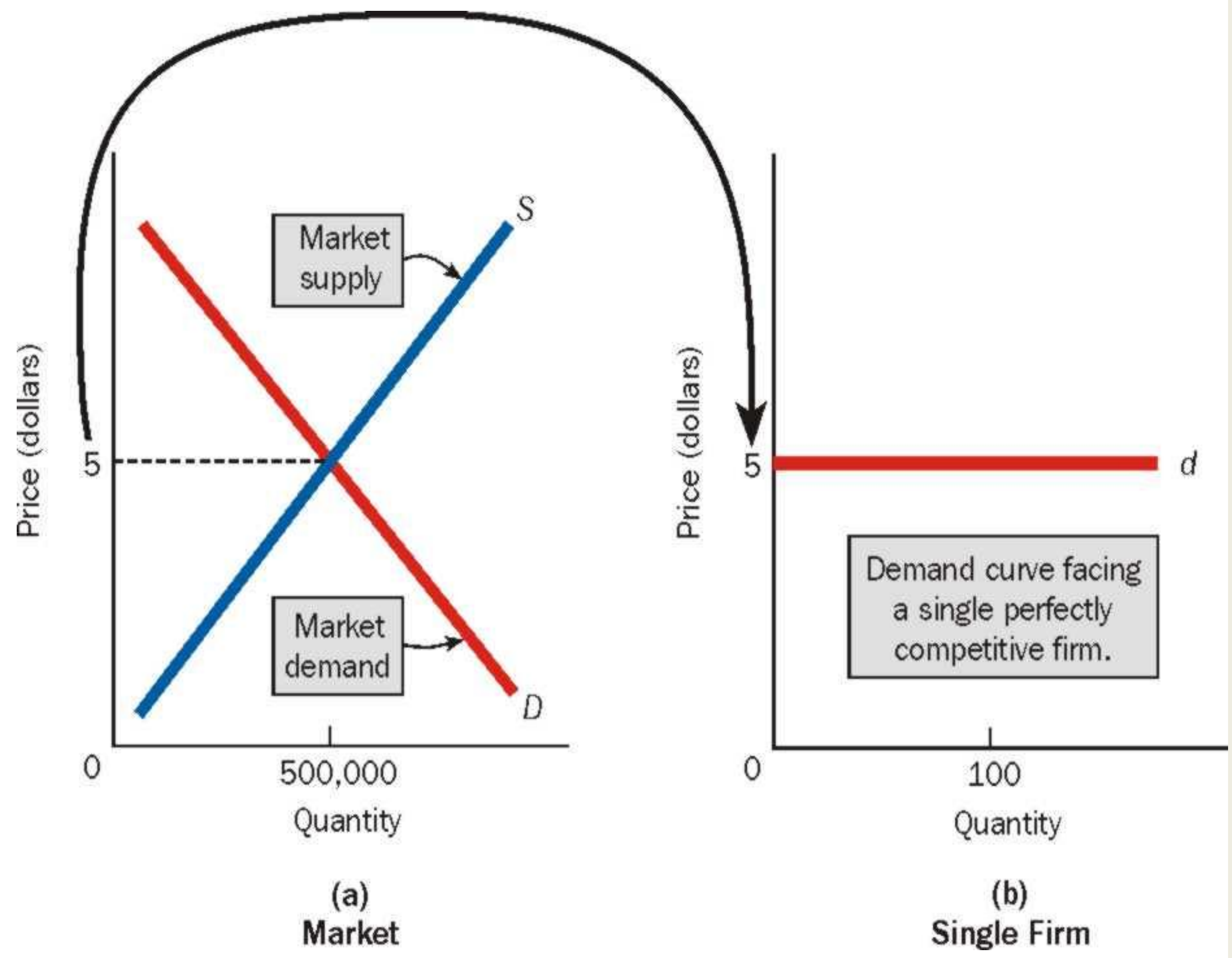
- There are many sellers and many buyers, none of which is large in relation to total sales or purchases.
- Each firm produces and sells a homogeneous product.
- Buyers and sellers have all relevant information about prices, product quality, sources of supply, and so forth.
- Firms have easy entry and exit.

Perfect Competition: Firms are Price Takers

- A price taker is a seller that does not have the ability to control the price of the product it sells; it takes the price determined in the market.
- A firms is restrained from being anything but a price taker if it finds itself one among many firms where its supply is small relative to the total market supply, and it sells a homogeneous product in an environment where buyers and sellers have all relevant information.

Perfect Competition: Demand Curve

When the equilibrium price has been established, a single perfectly competitive faces a horizontal demand curve at the equilibrium price.

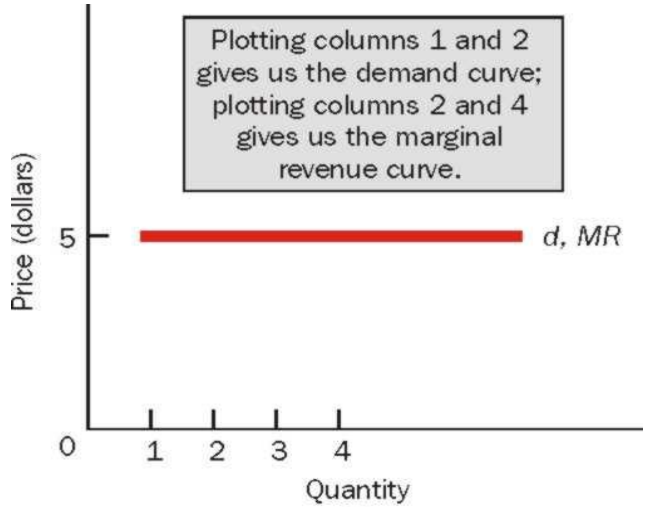


Perfect Competition: MR Curve and Demand Curve

- Marginal revenue at any output level is always equal to the equilibrium price. For a perfectly competitive firm, price is equal to marginal revenue. So, the marginal revenue curve for the perfectly competitive firm is the same as its demand curve.

(1) Price	(2) Quantity	(3) Total Revenue $= (1) \times (2)$	(4) Marginal Revenue $= \Delta TR/\Delta Q = \Delta(3)/\Delta(2)$
$5	1	$ 5	$5
5	2	10	5
5	3	15	5
5	4	20	5

(a)



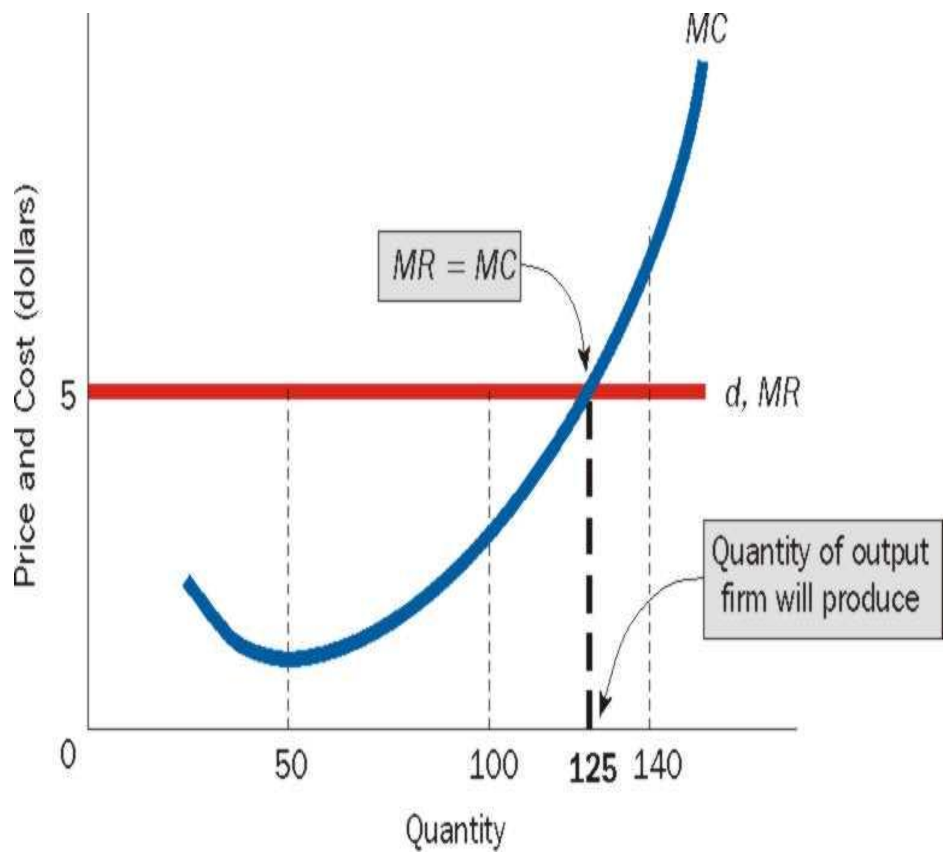
(b)

Perfect Competition in the Short Run
Profit Maximization

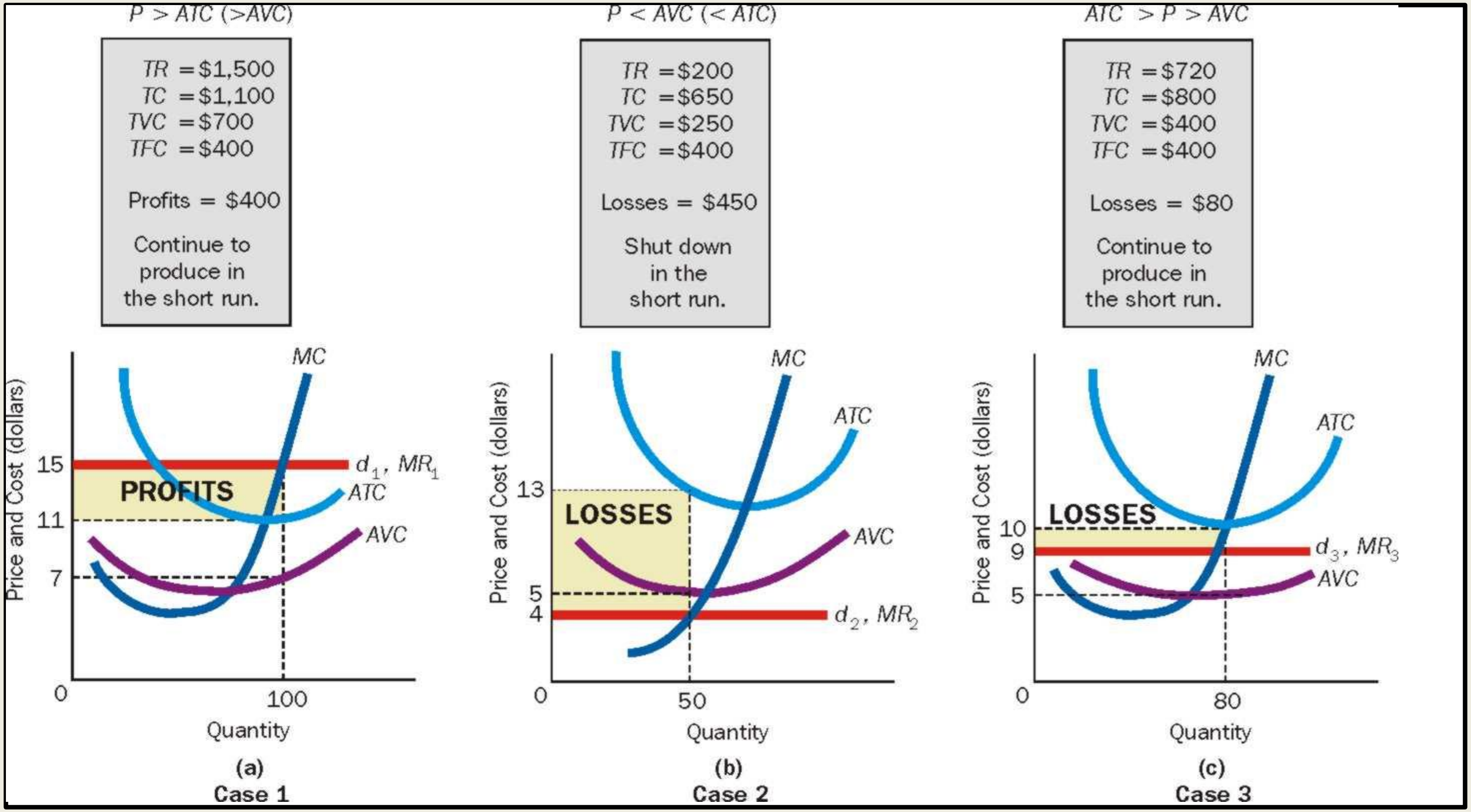
<u>The Profit – Maximization Rule:</u>

Produce the quantity of output at which –

1. MR=MC
2. Slope of MC > Slope of MR



Perfect Competition in the Short Run
Profit Maximization



Perfect Competition: Production Decision

- A firm produces in the short run as long as price is above average variable cost.
- A firm shuts down in the short run if price is less than average variable cost.
- A firm produces in the short run as long as total revenue is greater than total variable costs.
- A firm shuts down in the short run if total revenue is less than total variable costs.

Monopoly

Assumptions:

- There is one seller
- The single seller sells a product for which there is no close substitute
- There are extremely high barriers to entry

Reason for existence of Monopoly:

- Legal barriers
- Economics of scale
- Exclusive ownership of a necessary resource

Monopoly: Pricing and Output Decisions

- A monopolist is a price searcher; that is, it is a seller that has the ability to control to some degree the price of the product it sells.
- In the theory of monopoly, the monopoly firm is the industry and the industry is the monopoly firm. They are the same.
- The price of the good being sold is greater than the marginal revenue. $P>MR$

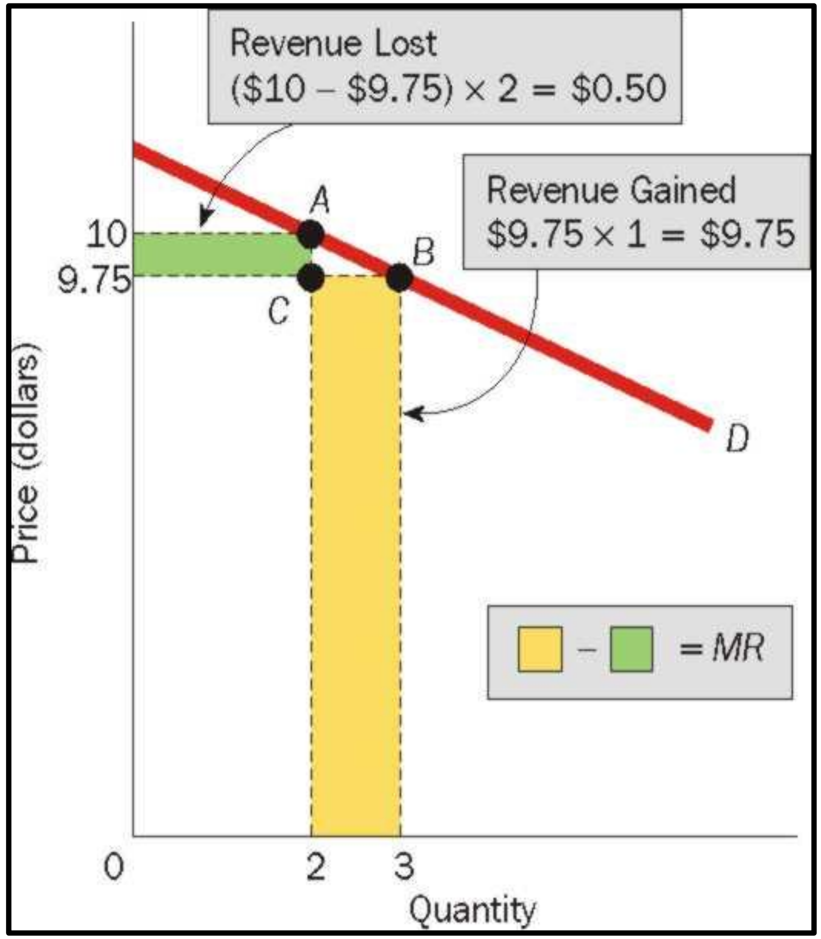
Monopoly: Pricing and Output Decisions

- To sell an additional unit of a good (per time period), the monopolist must lower price.
- The monopolist gains and loses by lowering price.
- The gain equals the price of the product times one.
- The loss equals the difference between the new lower price and the old higher price times the units of output sold before the price was lowered.
- Marginal revenue can be defined as revenue gained minus revenue lost
- *P*=Revenue gained, *MR*=Revenue Gained – revenue lost, and revenue lost is >0. Therefore, *P*>*MR*

Monopoly: Effect of Price Reduction on TR

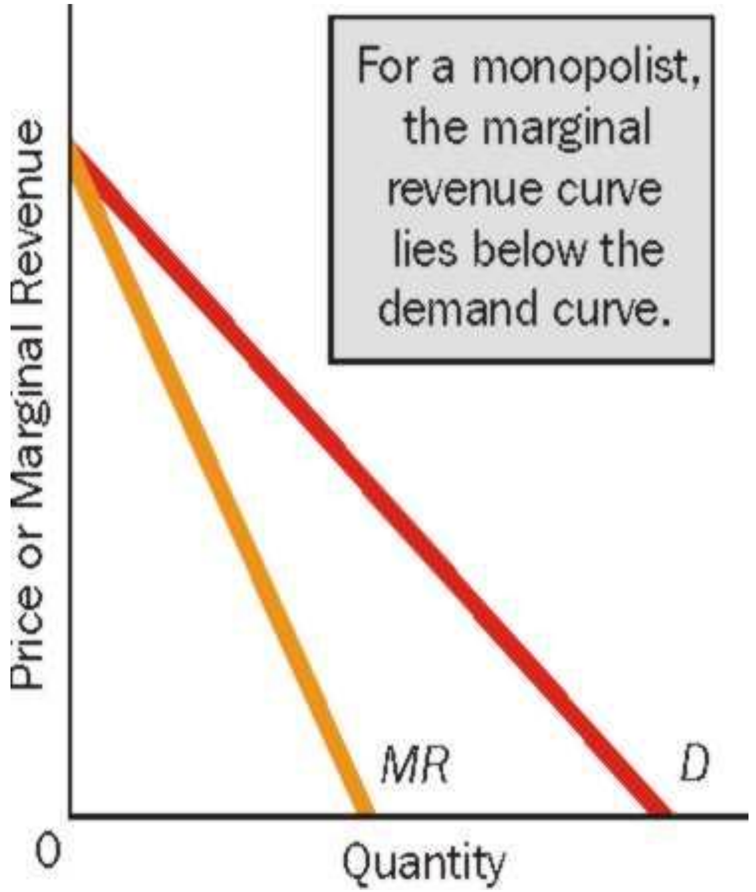
(1) *P*	(2) *Q*	(3) *TR*	(4) *MR*
\$10.00	2	\$20.00	\$9.25
9.75	3	29.25	

To sell an additional unit of the good, a monopolist needs to lower price. This price reduction both gains revenue and loses revenue for the monopolist. In the exhibit, the revenue gained and revenue lost are shaded and labeled. Marginal revenue is equal to the larger shaded area minus the smaller.



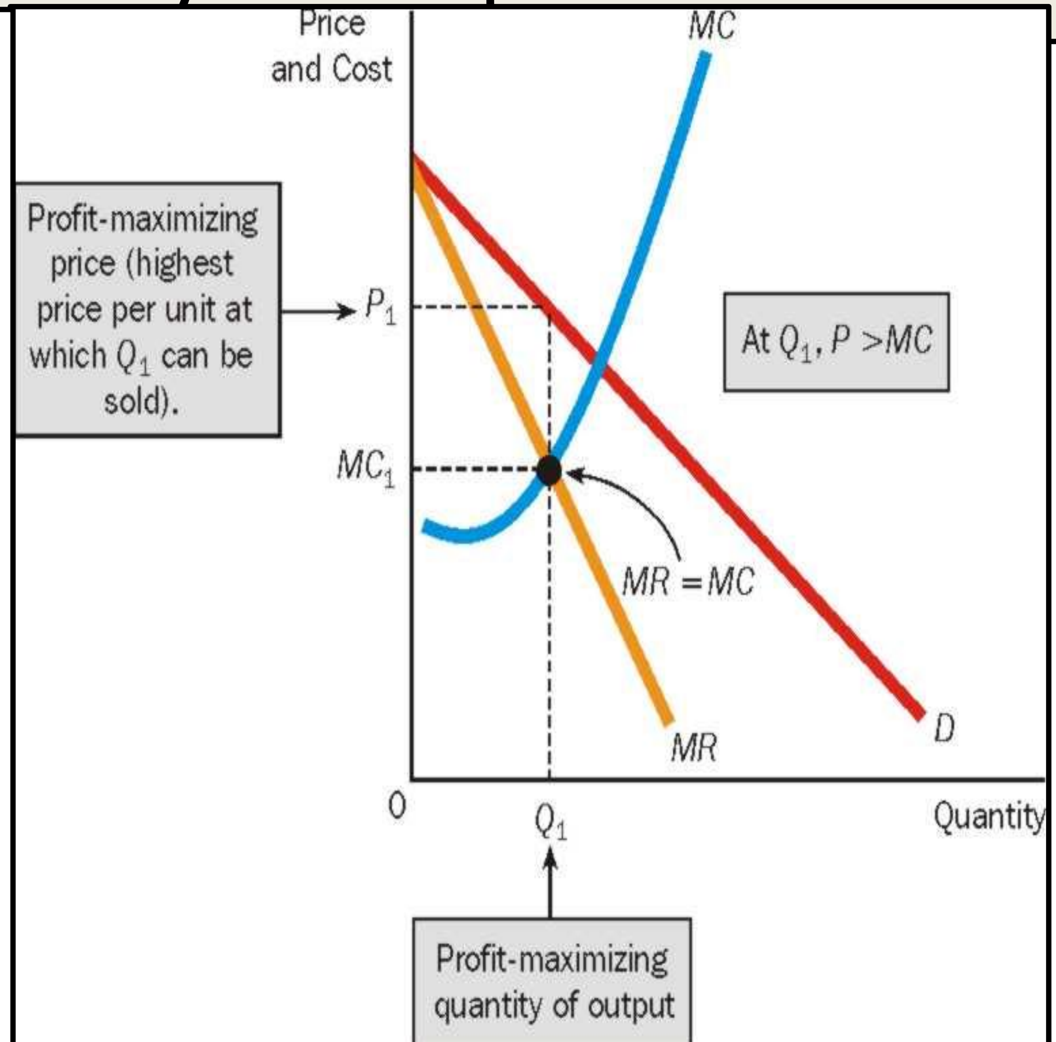
Monopolist Demand and Marginal Revenue Curves

In monopoly, the firm's demand curve is not the same as its marginal revenue curve. The monopolist's demand curve lies above its marginal revenue curve.

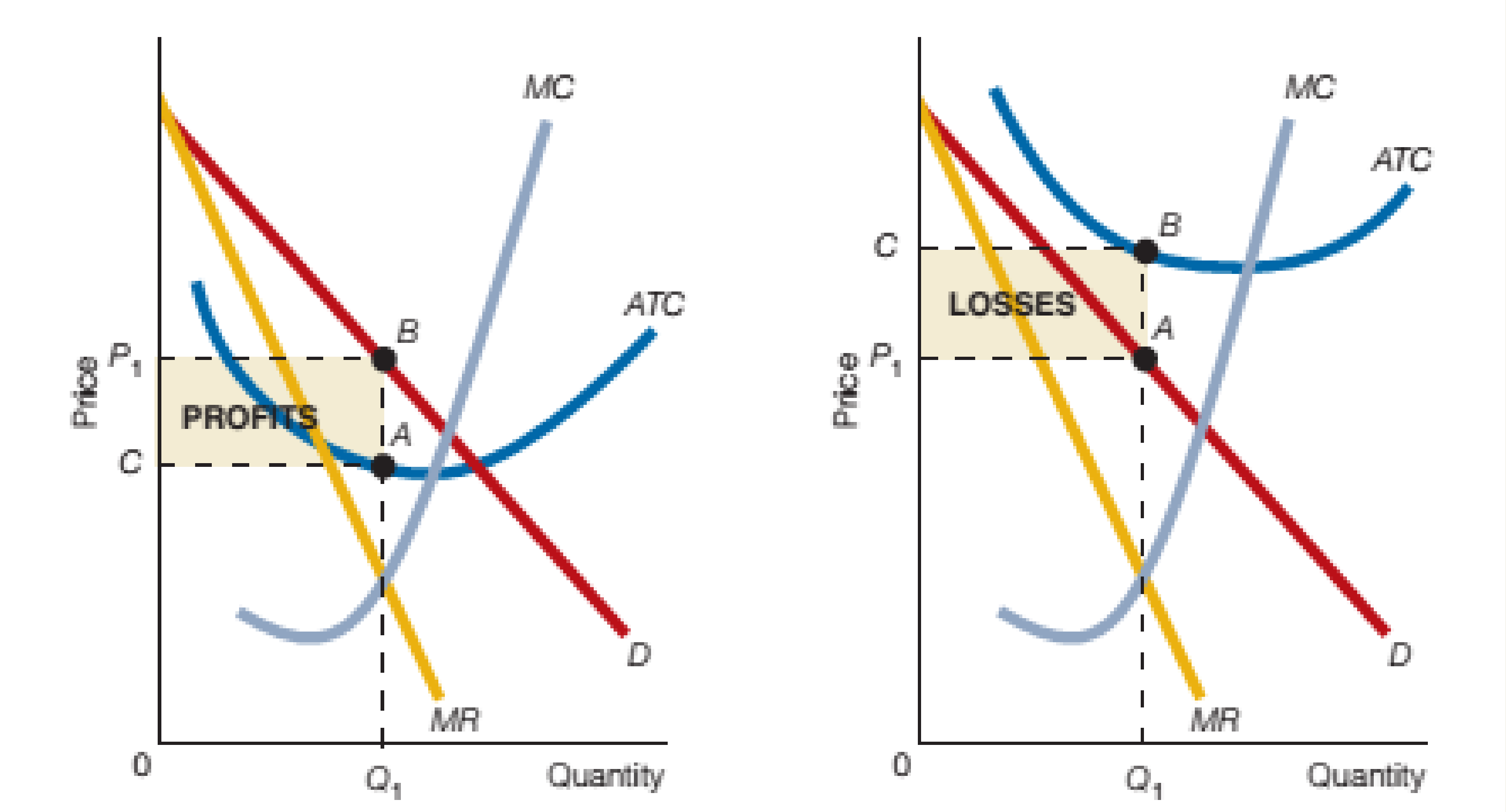


The Monopolist's Profit-Maximizing Price and Quantity of Output

The monopolist produces the quantity of output (Q_1) at which $MR=MC$, and charges the highest price per unit at which the quantity of output can be sold (P_1). Notice that at the profit maximizing quantity of output, price is greater than marginal cost, $P>MC$.



Monopoly Profits and Losses



(a)
Monopoly Profits

(b)
Monopoly Losses

Competition Vs. Monopoly

- For the perfectly competitive firm, *P=MR*; for the monopolist, *P>MR*. The perfectly competitive firm's demand curve is its marginal revenue curve; the monopolist's demand curve lies above its marginal revenue curve
- The perfectly competitive firm charges a price equal to marginal cost; the monopolist charges a price greater than marginal cost.
- A monopoly firm differs from a perfectly competitive firm in terms of how much consumers' surplus buyers receive.