Chapter eleven

Monopoly

Monopoly market

<u>A market is monopoly market if:</u>

1. **A firm is the only one in the market.**
2. **The firm can affect the market price by controlling the supply curve.**
3. **Entry into the market is blocked.**

- **For example, electric company, telephone company and water company.**

How does a monopoly choose price and output

Profit maximization:

A monopoly maximizes profit by producing the level of output, where marginal revenue equals marginal cost.

$$\mathbf{MR = MC}$$

The difference between perfect competition and monopoly markets is in revenue side (marginal revenue and average revenue).

- **Profit is the difference between total revenue and total cost.**
- **Profit = total revenue (TR) – total cost (TC)**

- **Total revenue = price * quantity**

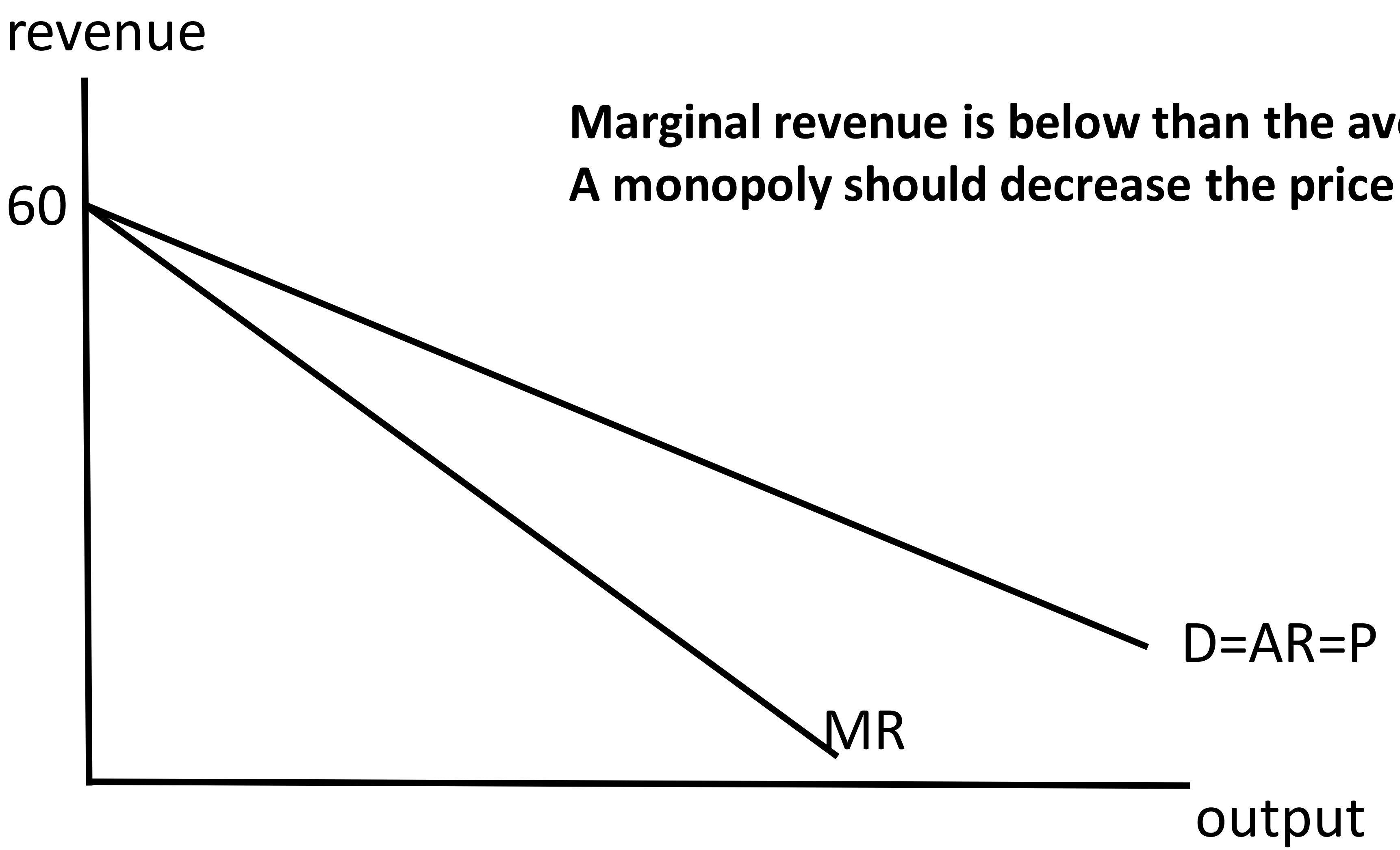
- **Marginal revenue =** $\frac{\boldsymbol{change\ in\ total\ revenue}}{\boldsymbol{change\ in\ quantity}}$ **=** $\frac{\Delta \mathrm{TR}}{\Delta Q}$

- **Average revenue =** $\frac{\boldsymbol{total\ revenue}}{\boldsymbol{quantity}}$ **=** $\frac{\mathrm{TR}}{Q}$

Marginal revenue for monopolist

quantity	Price	Total revenue	Average revenue	Marginal revenue
1	57	57	57	57
2	54	108	54	51
3	51	153	51	45
4	48	192	48	39
5	45	225	45	33
6	42	252	42	27

Marginal revenue and average revenue in monopoly market

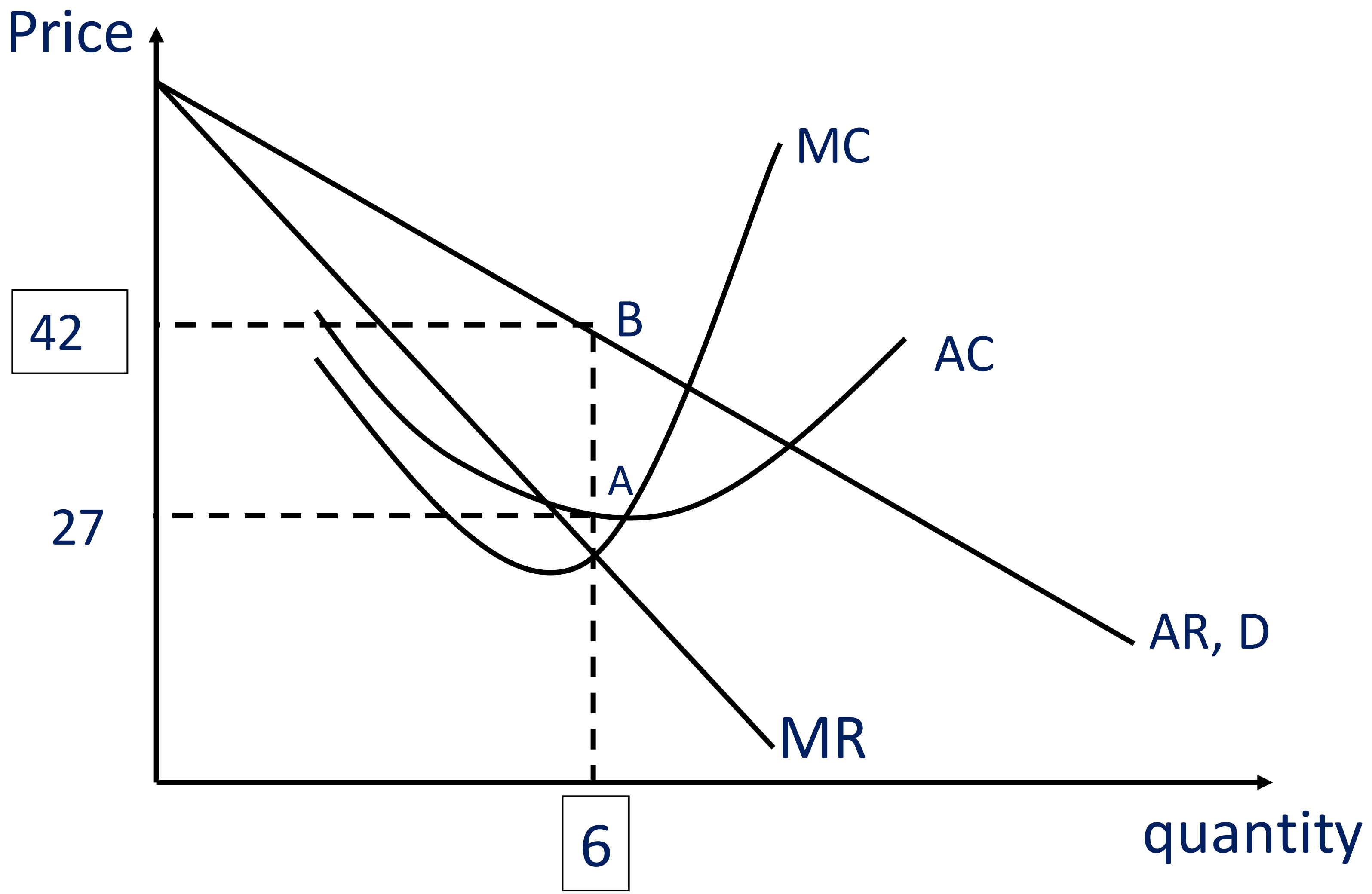


Marginal revenue is below than the average revenue (price).
A monopoly should decrease the price to sell more.

Marginal revenue and average revenue in monopoly market

- **Marginal revenue and average revenue fall as output increases.**
- **Marginal revenue is less than the average revenue (price).**
- **The shape of MR and AR is main difference between perfect competition market and monopoly market.**
- **In perfect competition, the MR equals AR.**

Monopoly equilibrium



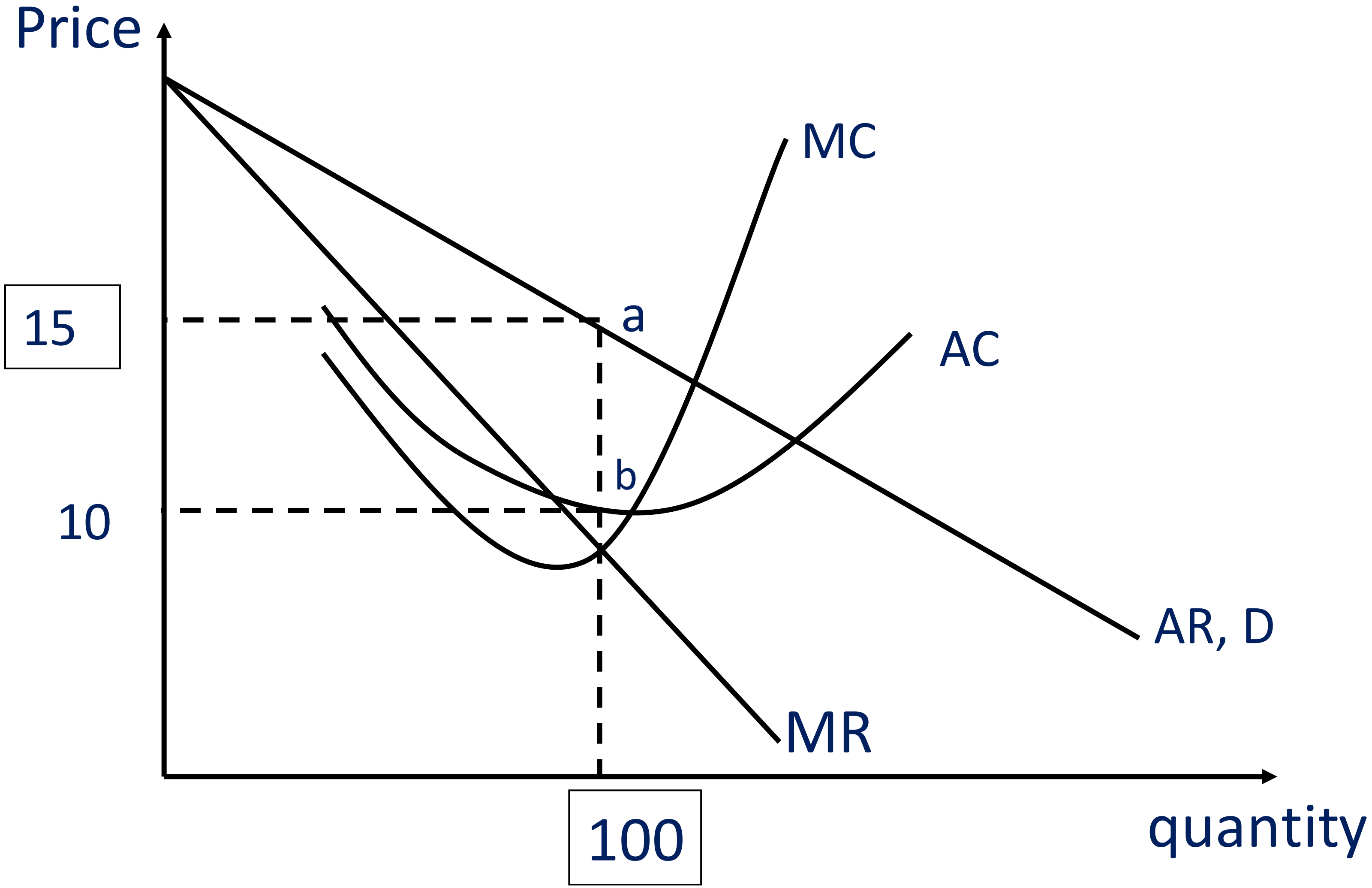
How does a monopoly choose price and output

- **profit maximizing output is, where MR=MC**
- **The firm will produce the level of output, where MR=MC. = 6 units**
- **Profit per unit = AR – AC = 42 – 27 =15 pounds**
- **Total profit = 6 * 15 = 90 pounds**

- **The monopoly firm makes economic profit in the short run and long run because the entry of new firms to the market is blocked.**

- **However, in perfect competition market, economic profit is zero in the long run.**

Monopoly equilibrium



- **The firm will produce 100 units because MR=MC.**
- **Profit maximizing output is 100 (MR=MC).**

- **At quantity of equilibrium, the AR =15 and AC = 10**
- **Profit per unit = AR – AC = 15 – 10 = 5**
- **Total profit = 100 * 5 = 500 pounds**

Best Wishes

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