Transport Economics

Lecture 3

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The Supply side

- Fixed inputs do not change with quantity produced, Variable inputs do
- In the very long run, nothing is fixed

- Fixed and variable costs
- Marginal cost = change in total cost when production changes by 1 unit

- Law of diminishing marginal returns
  - At the beginning, high average cost but low marginal cost
  - Eventually, higher marginal cost than average cost

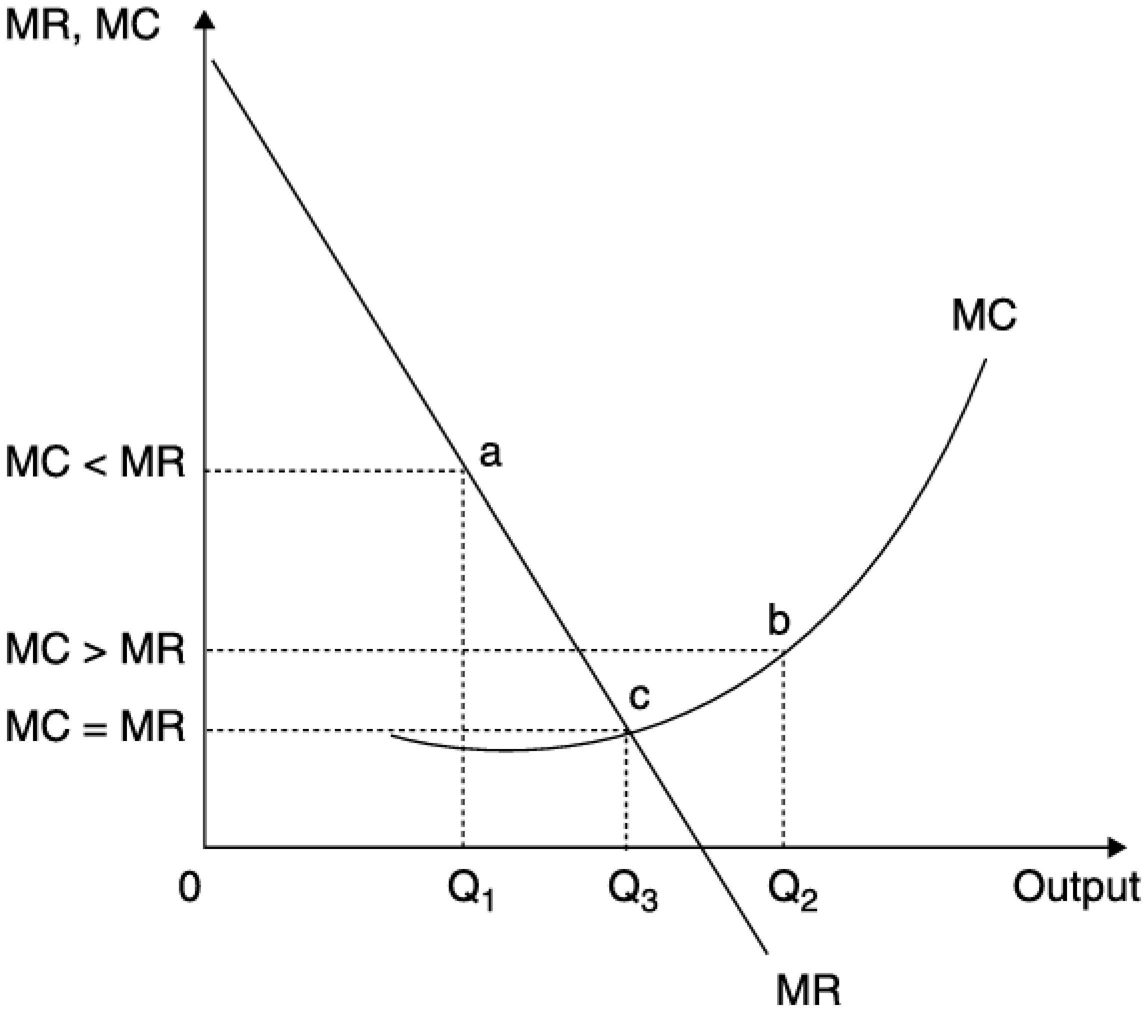
Worksheet 3.1 & 3.2

Marginal vs Average

- The average consumer may look very different from the marginal consumer.
- The average seller cost may look very different from the marginal seller cost.

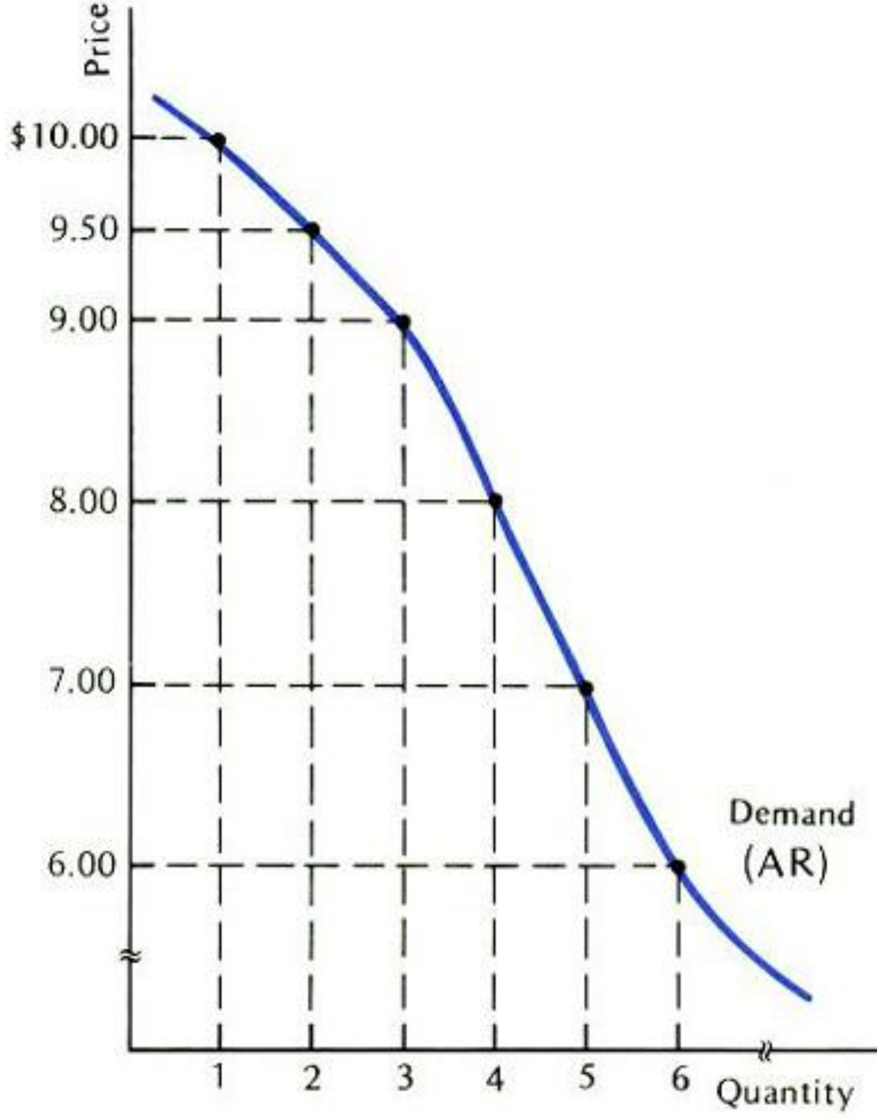
Profit Maximization

- Marginal Cost (MC)
- Marginal Revenue (MR)
- At MC < MR, can increase profits by selling more.
- At MC > MR, losing revenue on the last sales.
- At MR = MC, profits maximized.



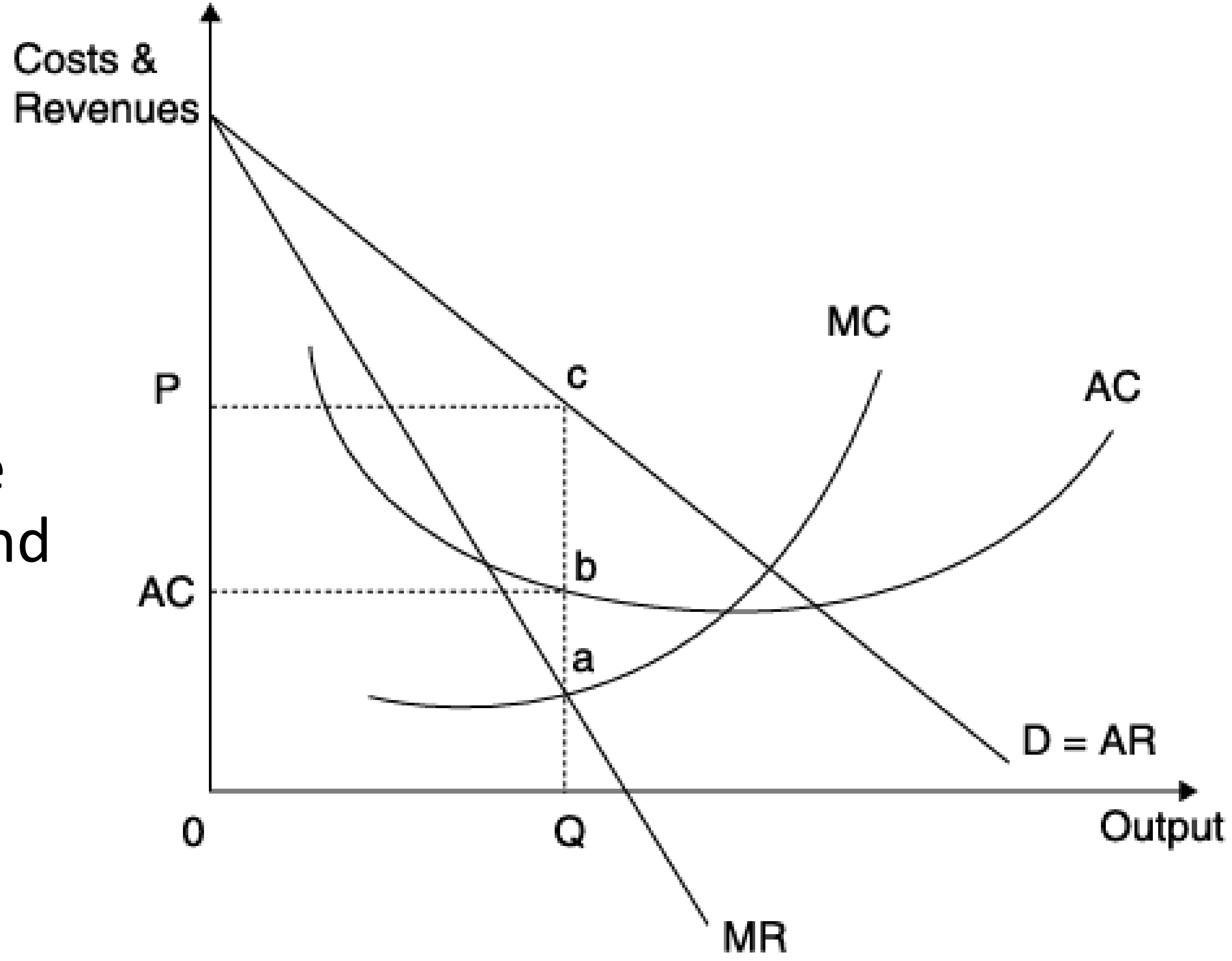
Demand = Average Revenue (AR)

- AR = amount received per unit sold
- When all items are sold for the same price, AR = price
- When demand curve is downward sloping, Average revenue > Marginal revenue



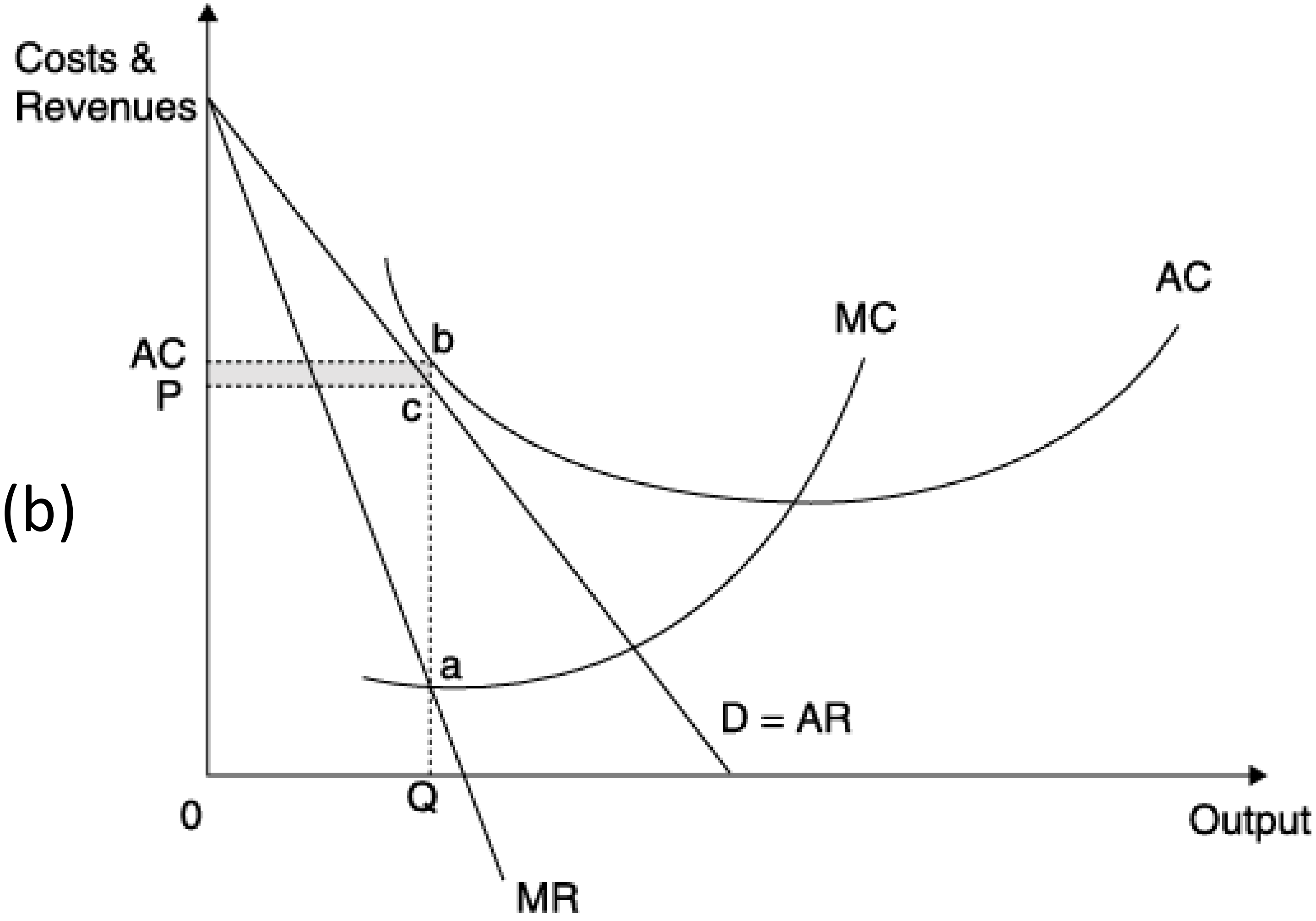
Profits

- Maximized at MR = MC (a)
- Profits per unit sold = Difference between Average Revenue (c) and Average Cost (b)



Losses

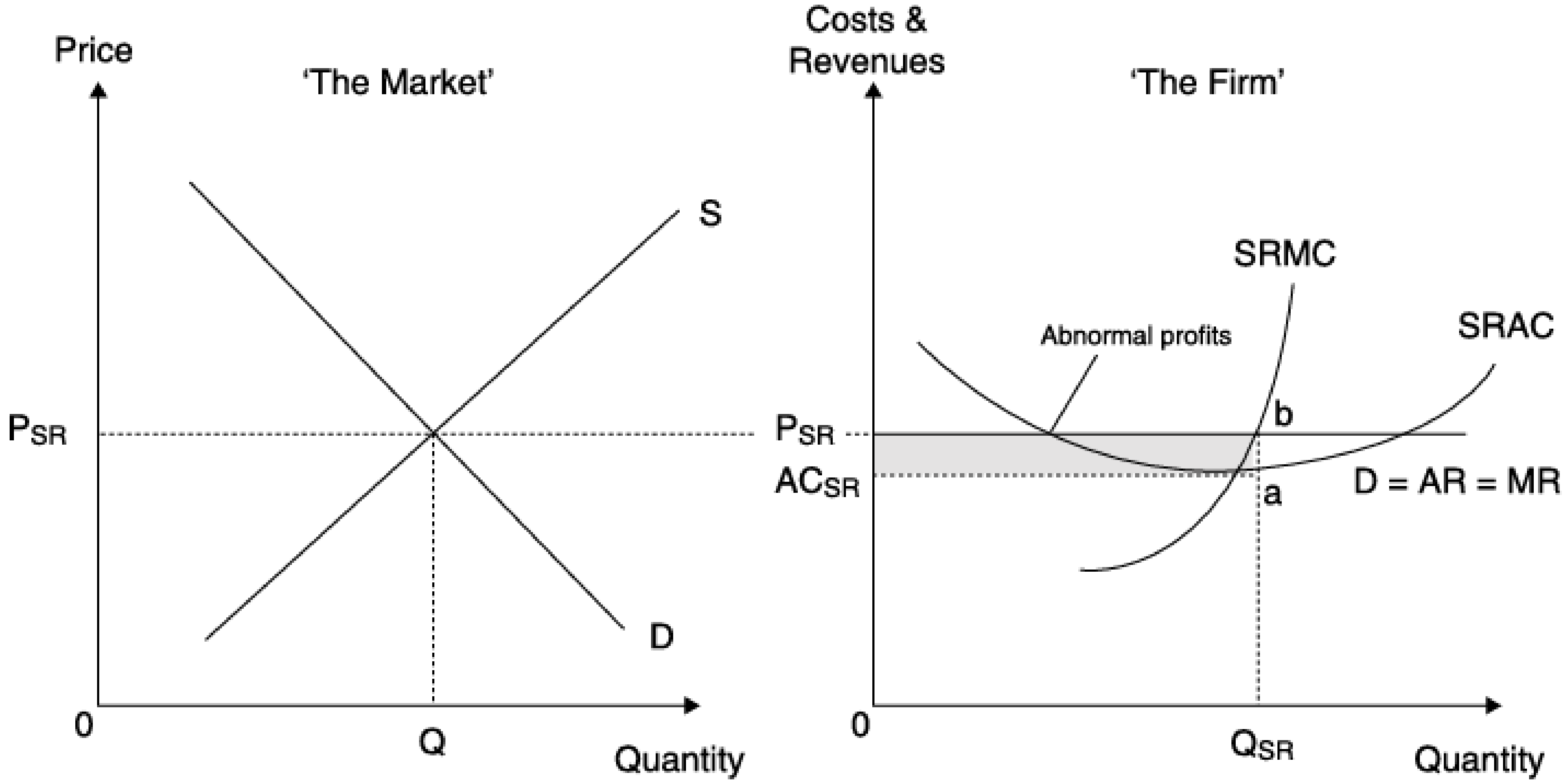
- Minimized at MR = MC (a)
- Difference between Average Revenue (c) and Average Cost (b)



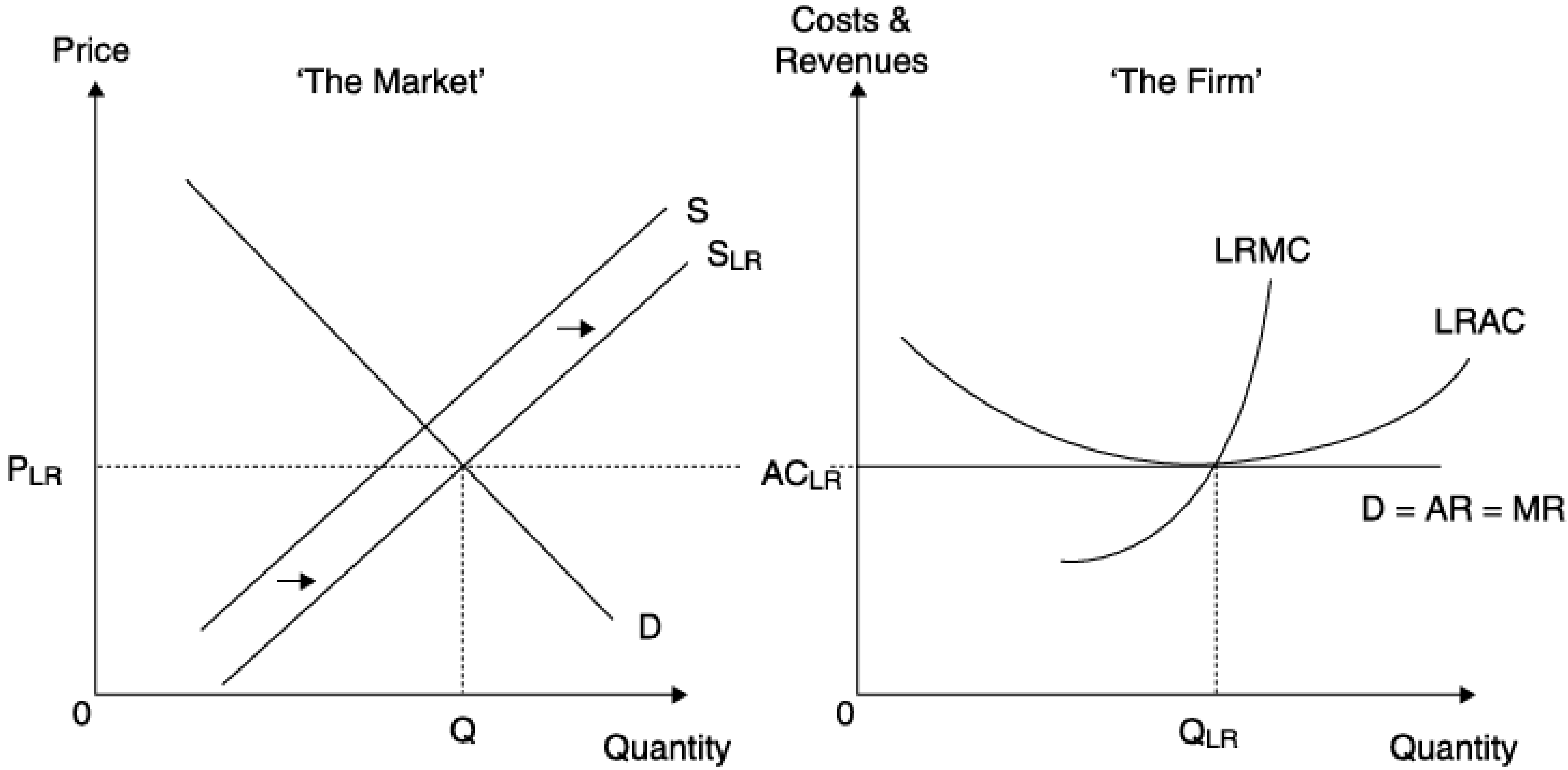
Perfect Competition

- Homogeneous product
- High number of buyers and sellers
- Perfect information
- Freedom of entry and exit (in the long run)

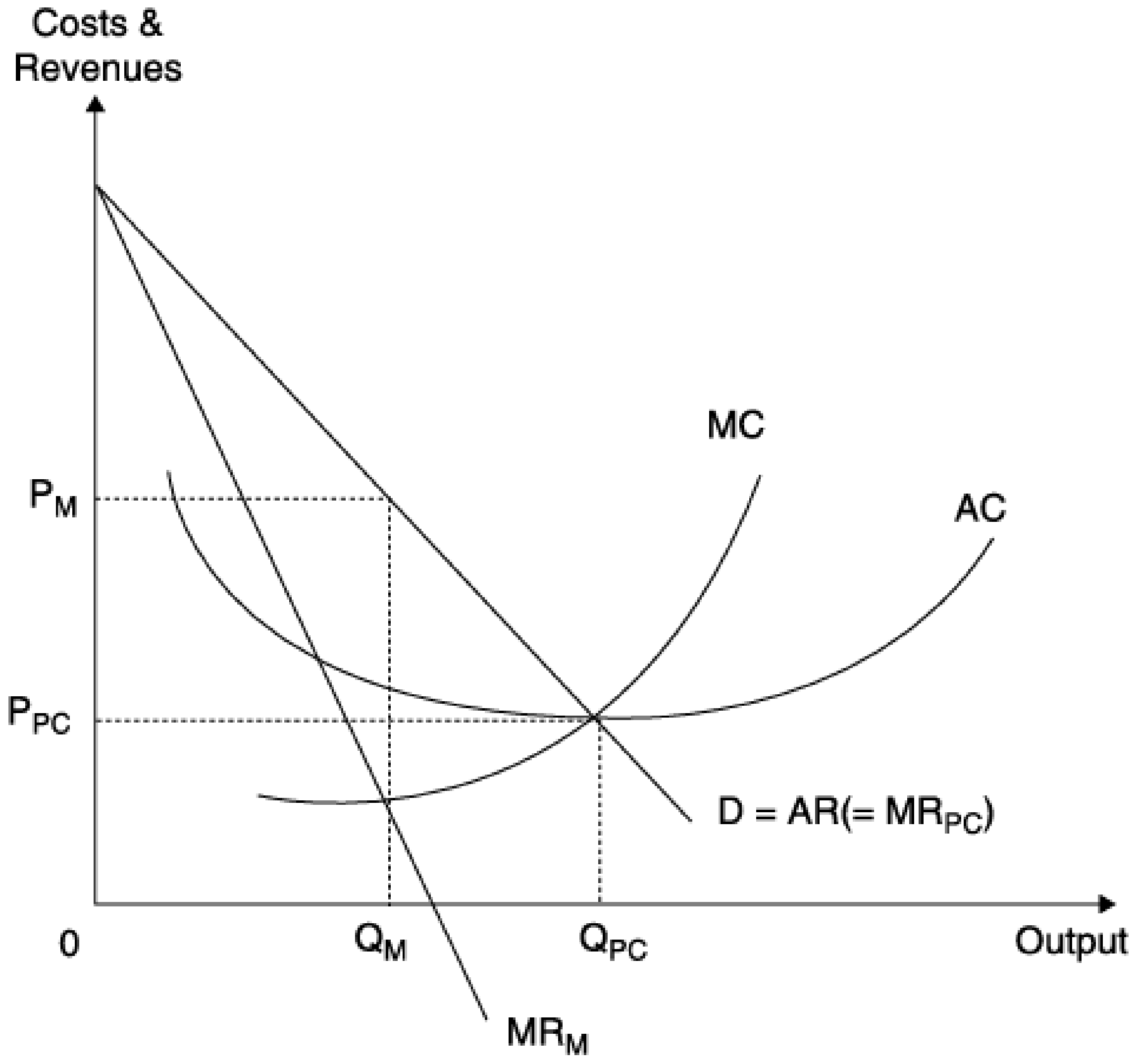
Perfect Competition (short run)



Perfect Competition (long run)



Disadvantages of monopoly



- Higher prices and lower output
- Production inefficiency
- Lower consumer surplus and more regressive
- Lower overall surplus

Worksheet 3.3

Advantages of monopoly

- Economies of Scale
  - Higher investment in R&D
  - Market size

- Wasteful competition

Barriers to entry

- Structural
  - Firm size
  - High sunk costs
  - Strong brand loyalty, experience, …
- Strategic
  - Legal protection
  - Control over factors of production
  - Exclusive dealerships, …
- Government regulations
  - Price controls
  - Restrictions to entry
  - Control of complements and substitutes

Deadweight Loss

Loss in (consumer surplus + producer surplus)

Worksheet 3.4