

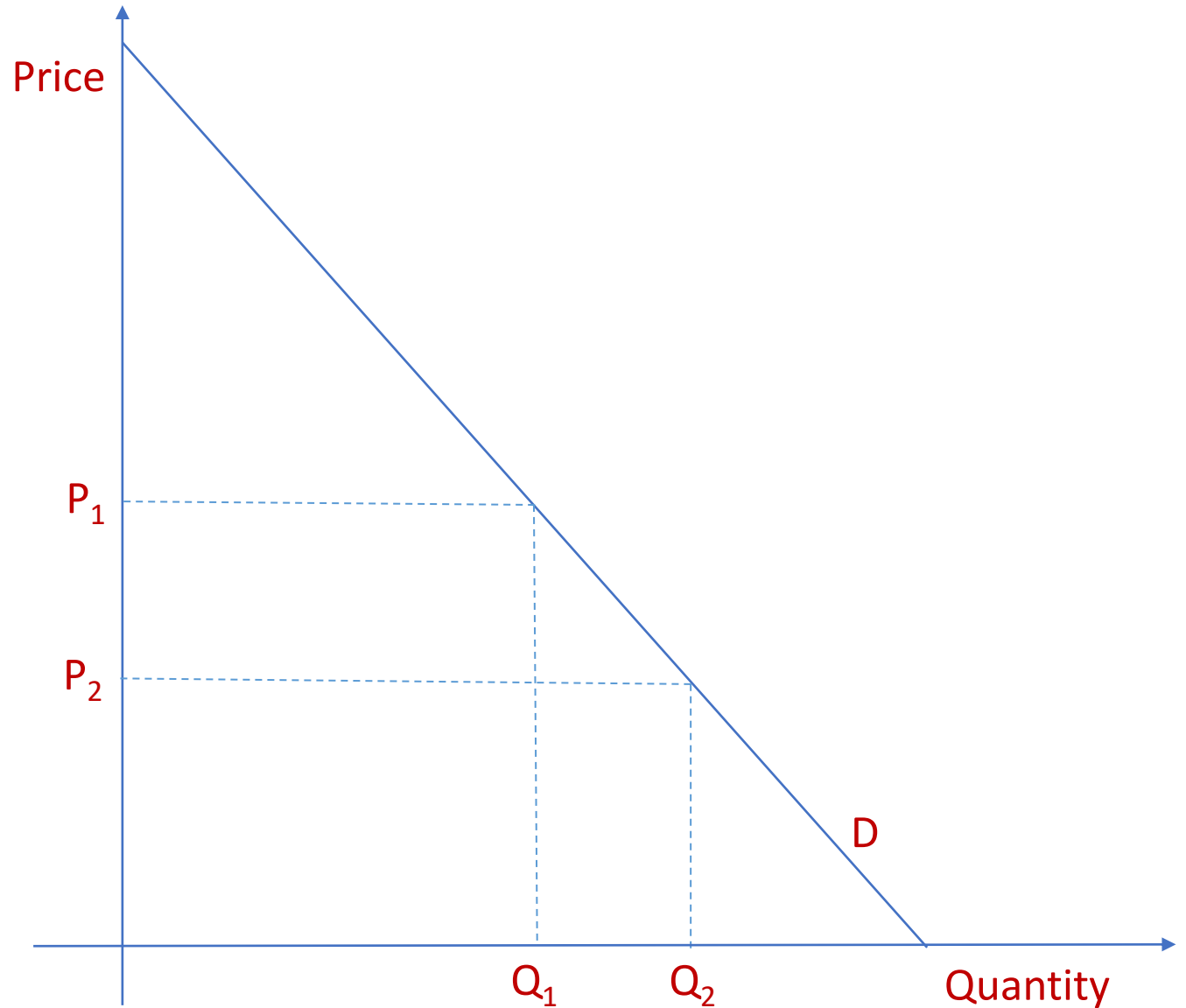
# Regulation and ownership (review)

- Why we need government interventions
  - Externalities, lack of competition, information asymmetry, natural monopolies
- Drawbacks of regulation
  - Misaligned incentives, 'second-best solution', information asymmetry, regulator accountability, ...
- Public vs private ownership
- Pricing of natural monopolies

# Price Discrimination

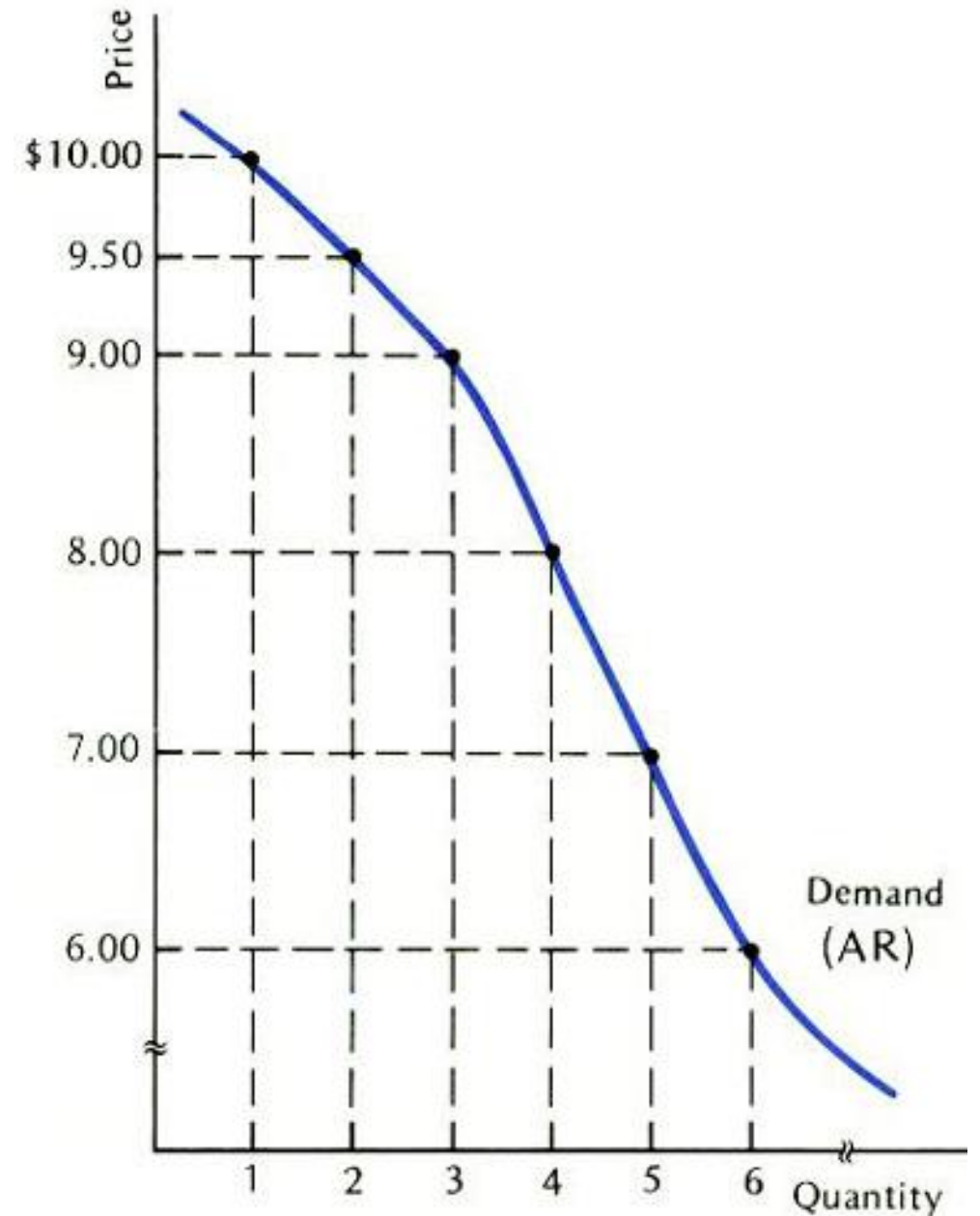
# Price Discrimination

- Sell the same service to different buyers at different prices
- E.g., student discounts, lower off peak fares, etc.
- Can sell more quantities than at one equilibrium price.



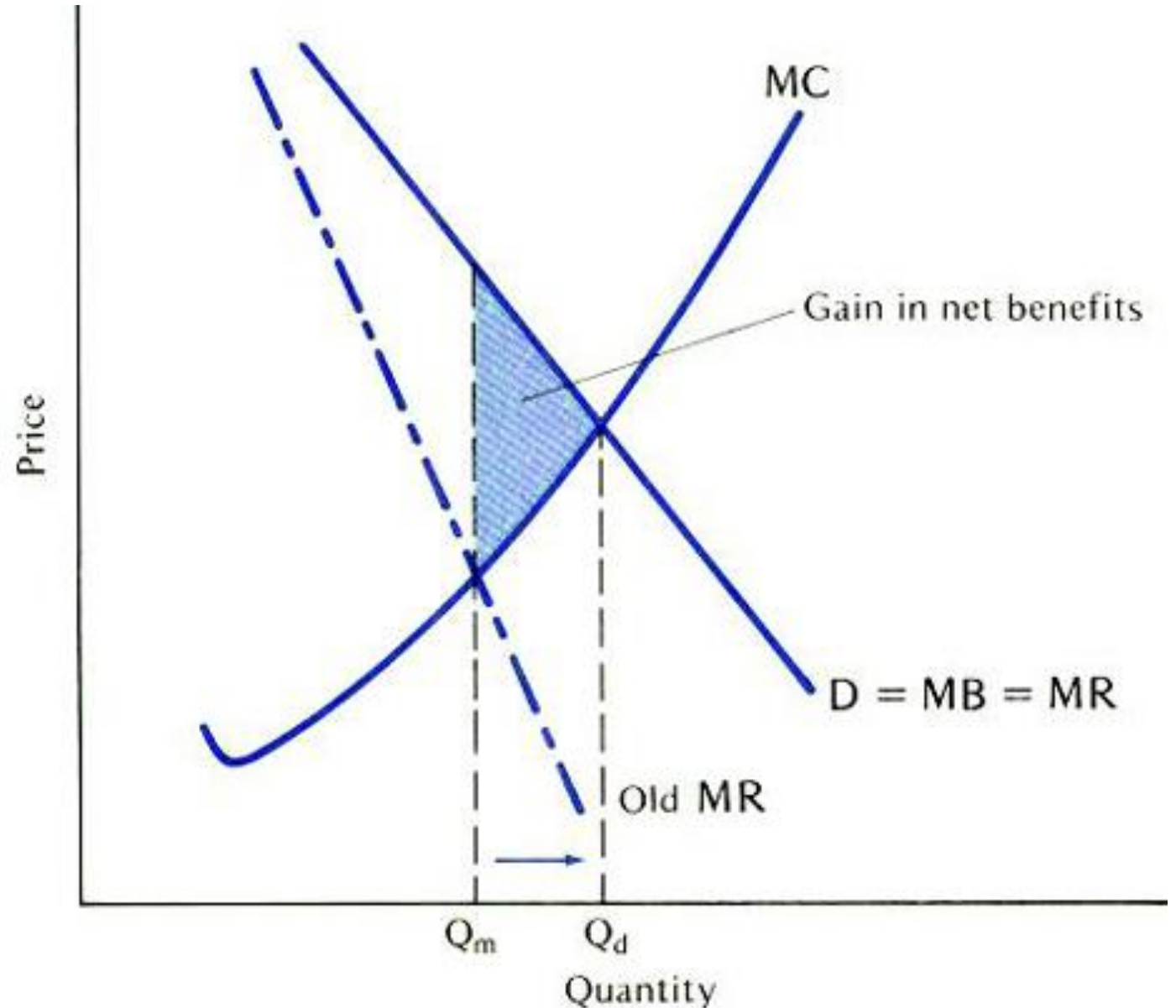
# Perfect Price Discrimination

- Sell each individual item produced at the highest possible price.
- Zero consumer surplus!



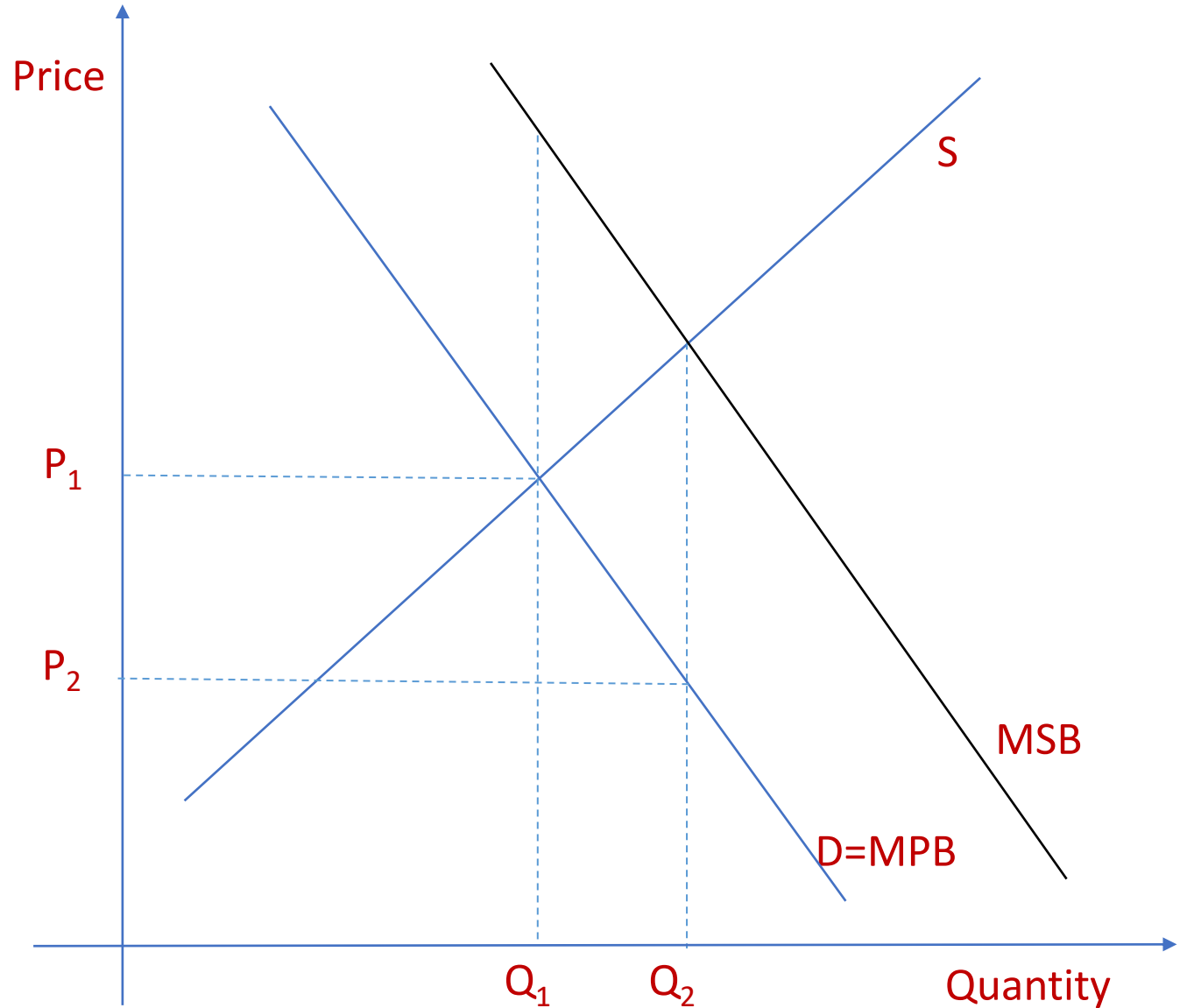
# Perfect Price Discrimination

- Can help tackle underproduction of services under monopolies.
- No deadweight loss from monopolies!
- Marginal revenue = Demand = Marginal benefit



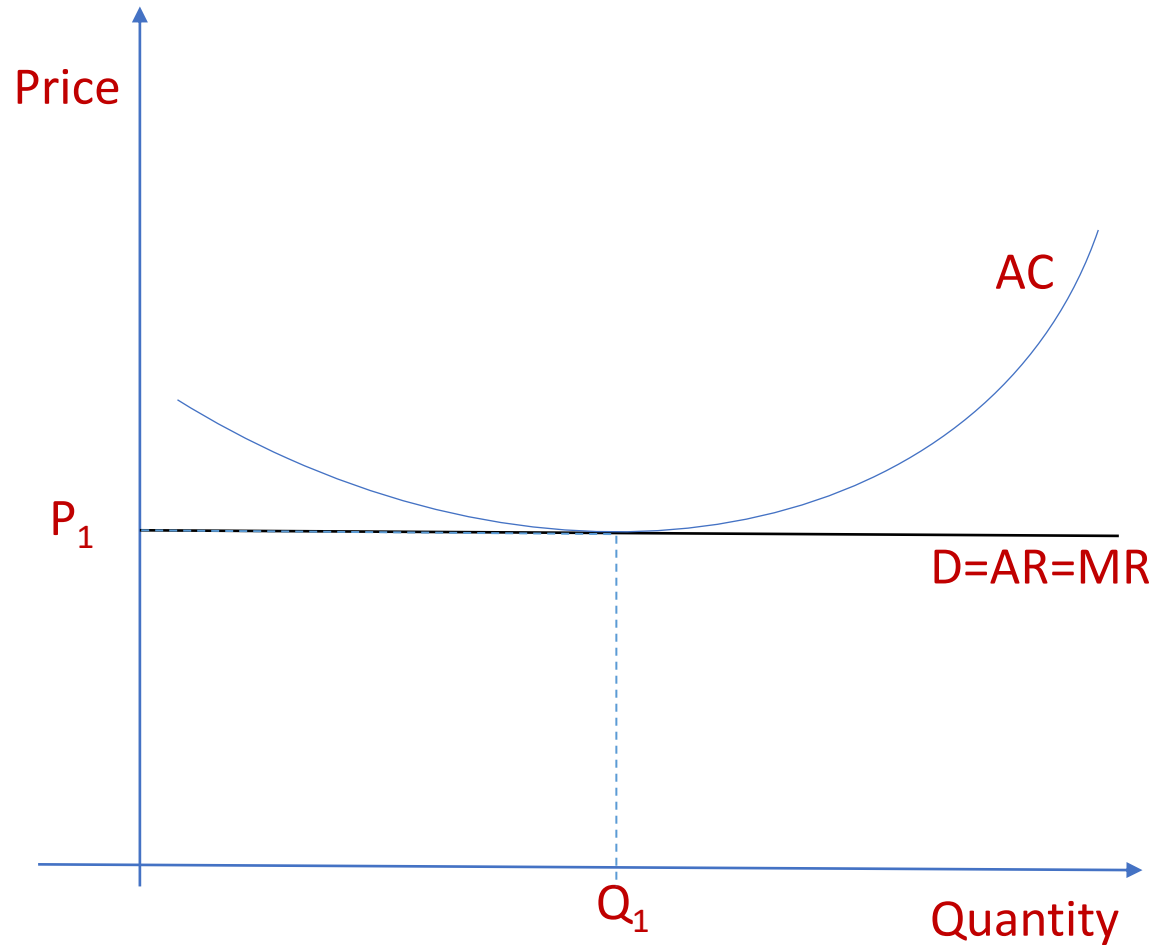
# Perfect Price Discrimination

- Can help tackle underproduction of services due to positive externalities.
- Price discriminate perfectly between  $P_1$  and  $P_2$ :
- No deadweight loss from positive externalities!



# No price discrimination under perfect competition

- Not possible without market power
- Firms in competitive markets have to take prices as given.



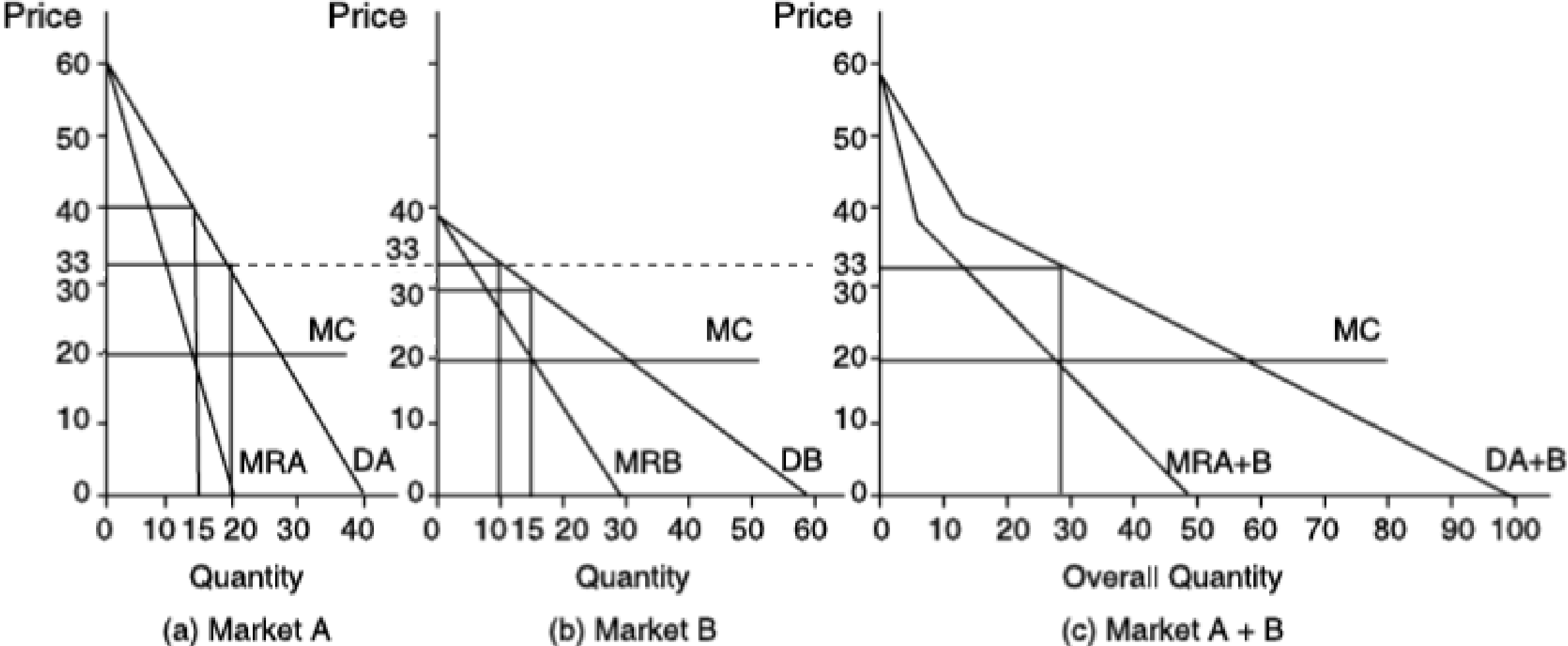
# Conditions for price discrimination

- Imperfect competition
  - Seller must have some market power to set prices
- Buyers are separable
  - E.g., preventing economy class travelers from lounging in the first class, stopping an adults from using a child's ticket, etc.
- Low admin costs
- Different elasticities of demand
  - No point in dividing the market if they are ultimately to be charged the same price.

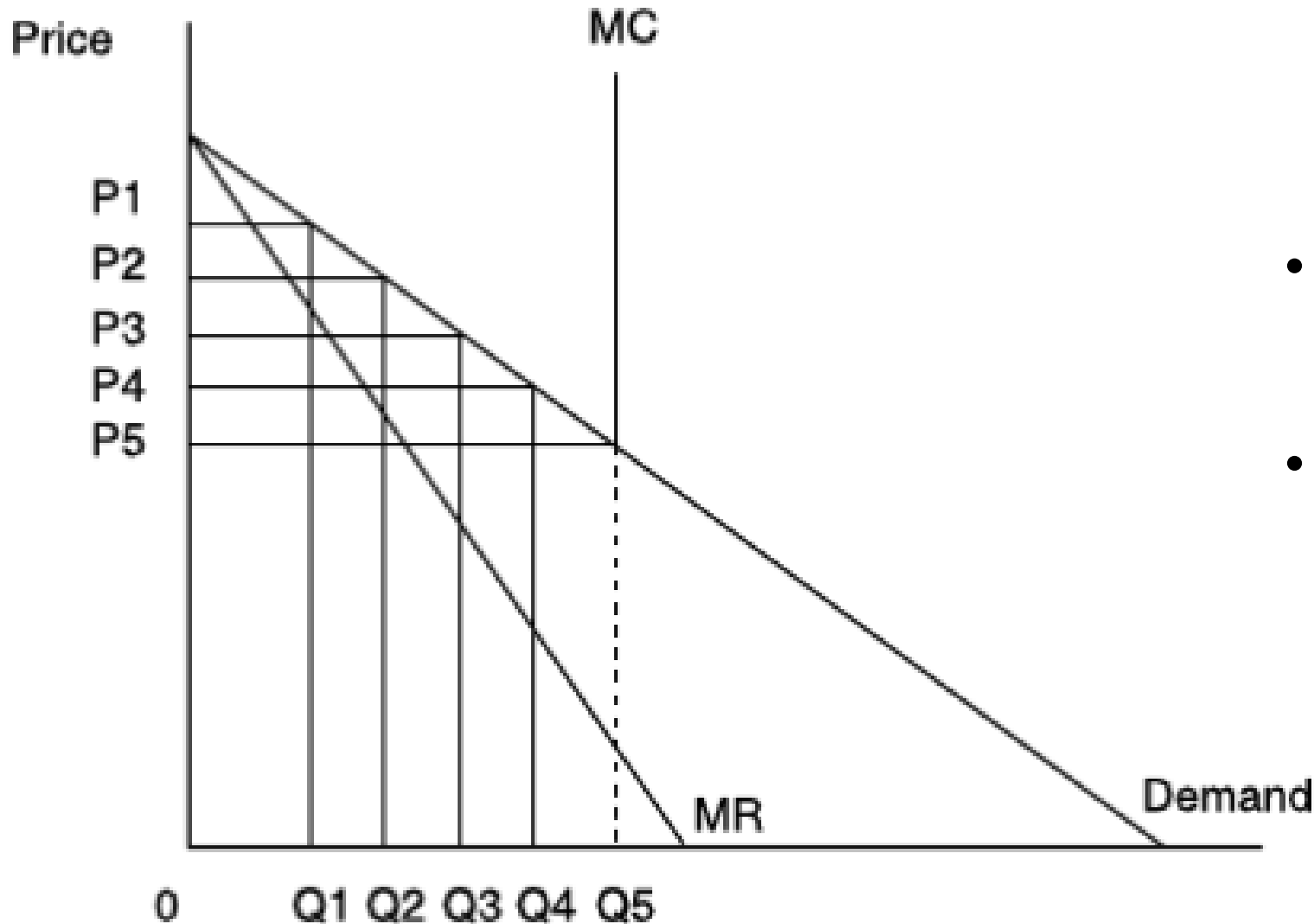


# Different elasticities of demand

## Worksheet 6.1



# Sale of airline tickets



- Marginal cost is constant until aircraft reaches full capacity, then becomes perfectly inelastic.
- Profit maximization ( $MR=MC$ ) at around P2
- Can do better with price discrimination
  - E.g., selling at lower prices to those who can commit earlier to travel
  - At higher prices to those who book late (and have fewer alternatives / more price-inelastic demand)

# Advantages of price discrimination

- Higher revenue for suppliers
  - Allows some suppliers to stay in business who otherwise would make a loss
- Lower prices for some consumers
- Manages demand
  - E.g., spread out demand across peak and off-peak travel times

# Disadvantages of price discrimination

- Higher prices for some consumers
- Lower consumer surplus
- May be unfair
  - Those paying higher prices may not be the poorest, just have worse alternatives.
- Administration costs
- Predatory pricing

# Predatory pricing

- When a supplier sells a good or service at a price below cost (or very cheaply) with the intention of forcing rival suppliers out of business.
- An incumbent monopolist with large financial capital can afford to cut prices and make a temporary loss to deter competition.
- Lower prices in the short run, but harms consumers (higher monopoly prices) in the long run.

# Other pricing examples

- Ridesharing platforms
  - Dynamic price discrimination
  - also discriminating on costs e.g., driver compensations
- Road travel
  - HOV lanes, toll roads
- Congestion
  - Pricing in terms of travel speed