

UNIT 6

ELASTICITY





STUDY OBJECTIVES

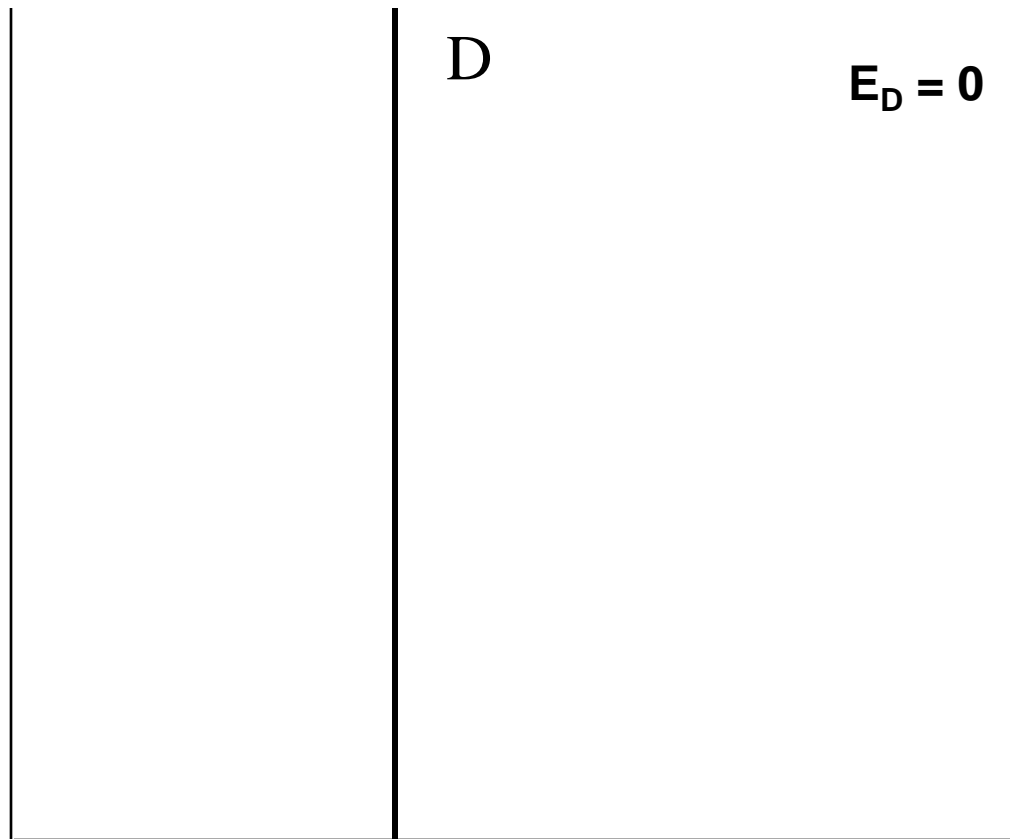
- **Define elasticity**
- **Discuss price elasticity of demand**
- **Indicate the relationship between elasticity and total revenue**
- **Discuss factors that may influence price elasticity of demand**
- **Discuss income elasticity of demand**



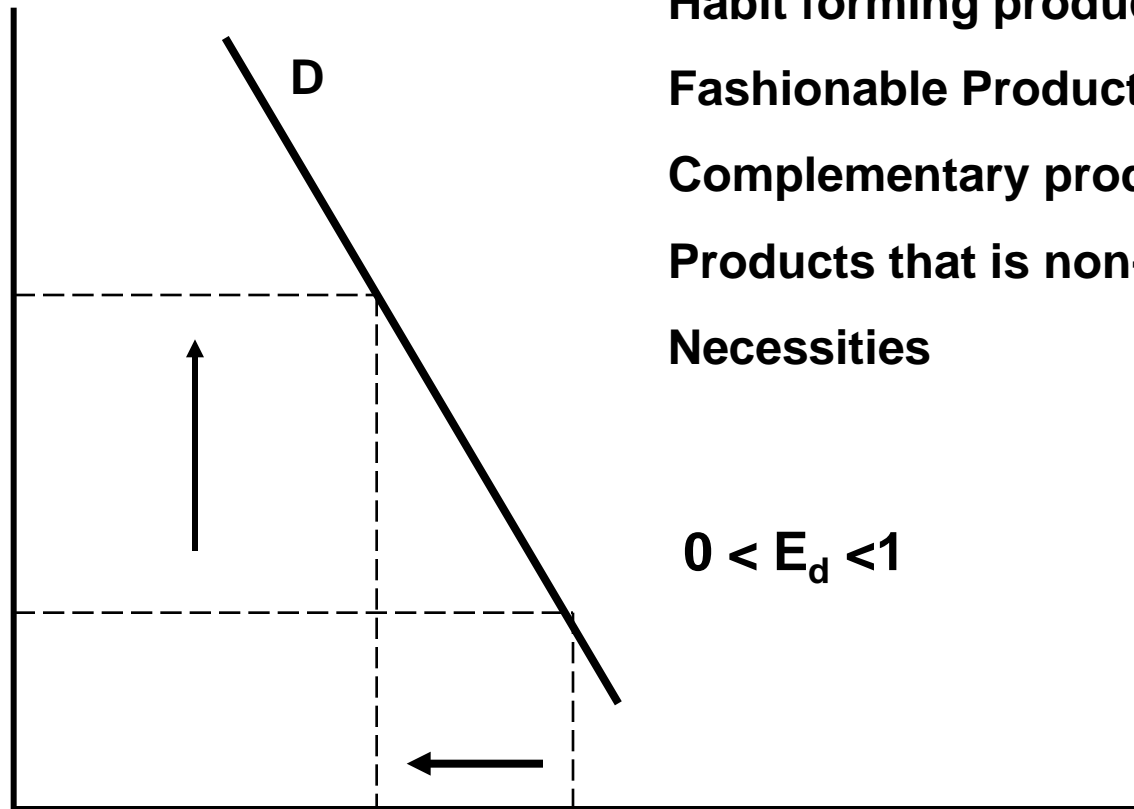
PRICE ELASTICITY OF DEMAND

- Definition of price elasticity
- Five elasticity values:
 - Perfectly inelastic demand: $E_p = 0$
 - Relatively elastic demand: $E_p > 1$
 - Unit elastic demand: $E_p = 1$
 - Relatively inelastic demand: $0 < E_p < 1$
 - Perfectly elastic demand: $E_p = \infty$

PERFECTLY INELASTIC DEMAND CURVE



RELATIVELY INELASTIC DEMAND



Habit forming products

Fashionable Products

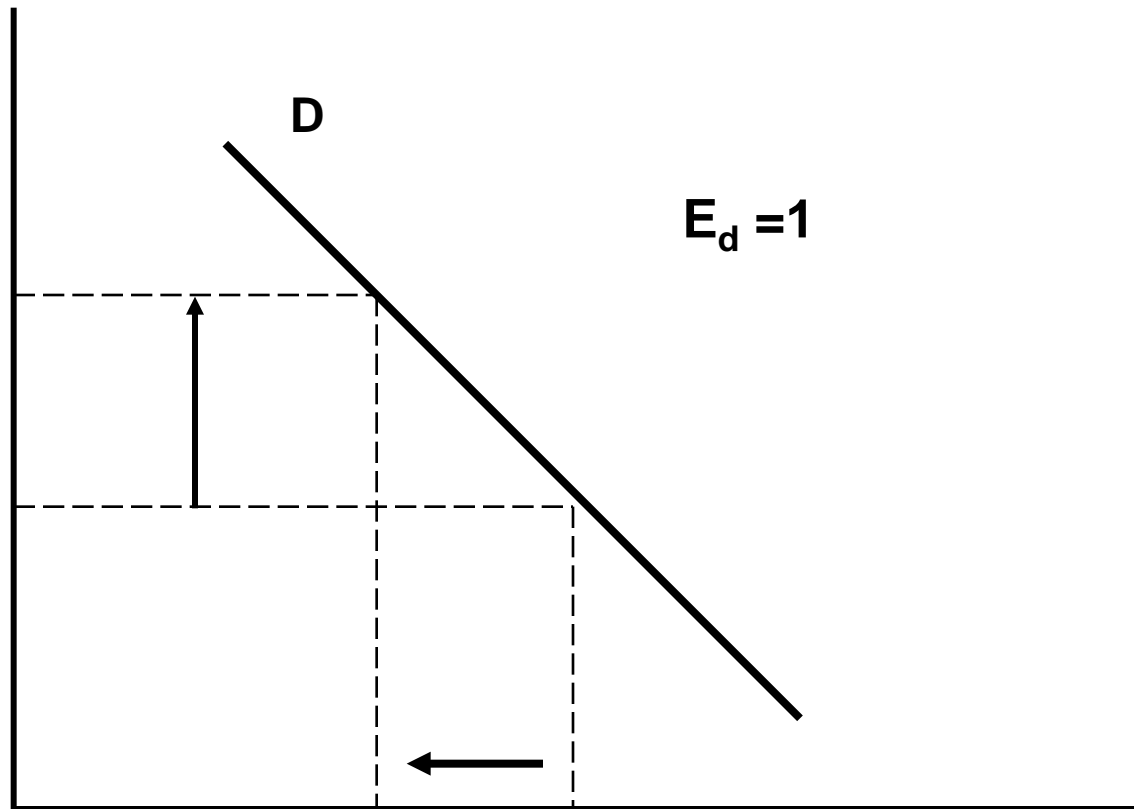
Complementary products

Products that is non-durable

Necessities

$$0 < E_d < 1$$

UNIT ELASTIC DEMAND



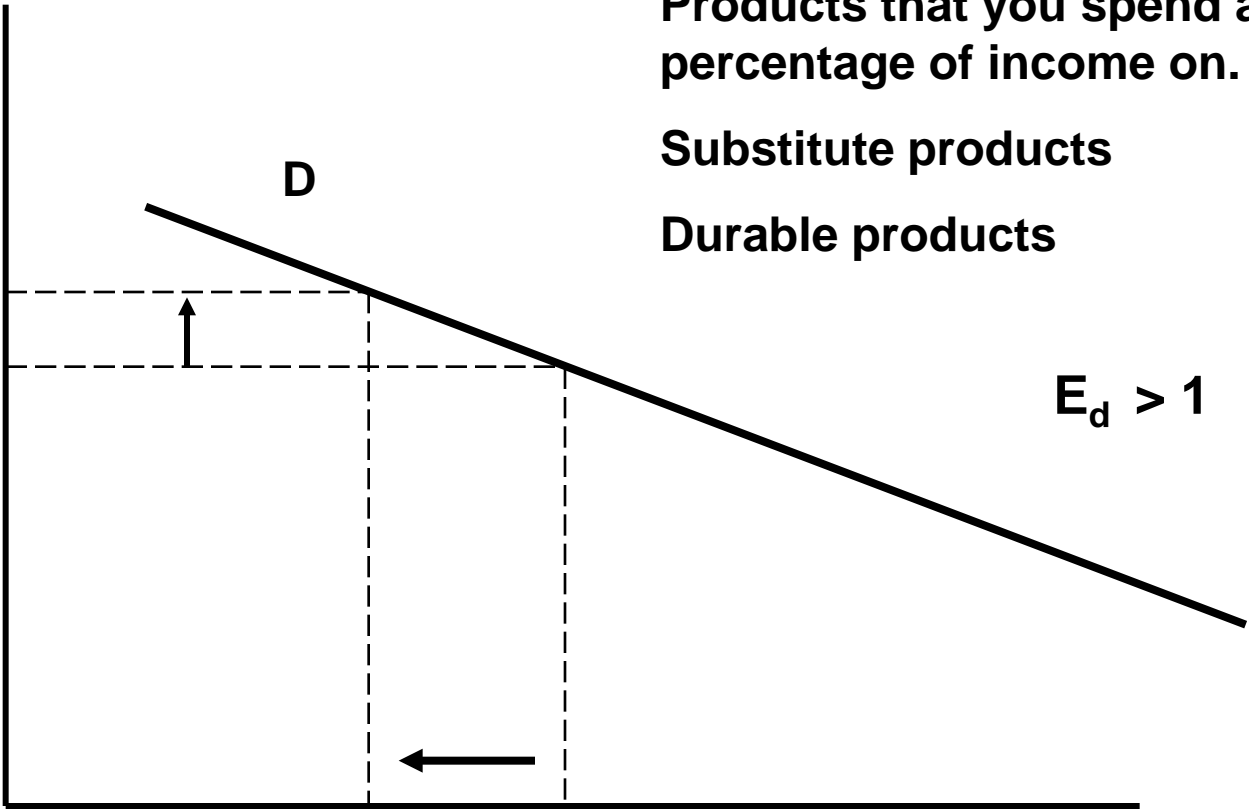
RELATIVELY ELASTIC DEMAND

Luxury products

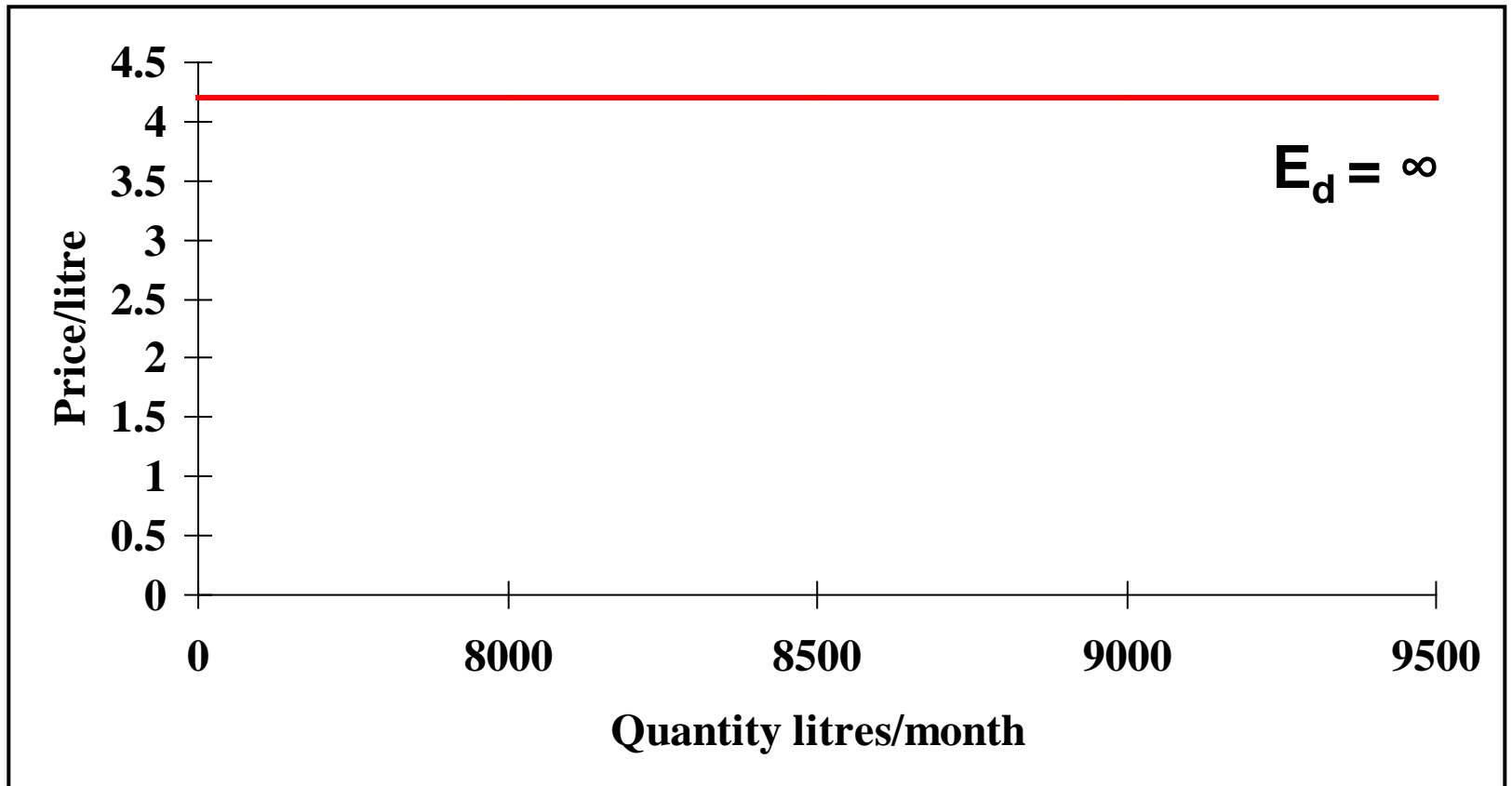
Products that you spend a large percentage of income on.

Substitute products

Durable products



PERFECTLY ELASTIC CURVE

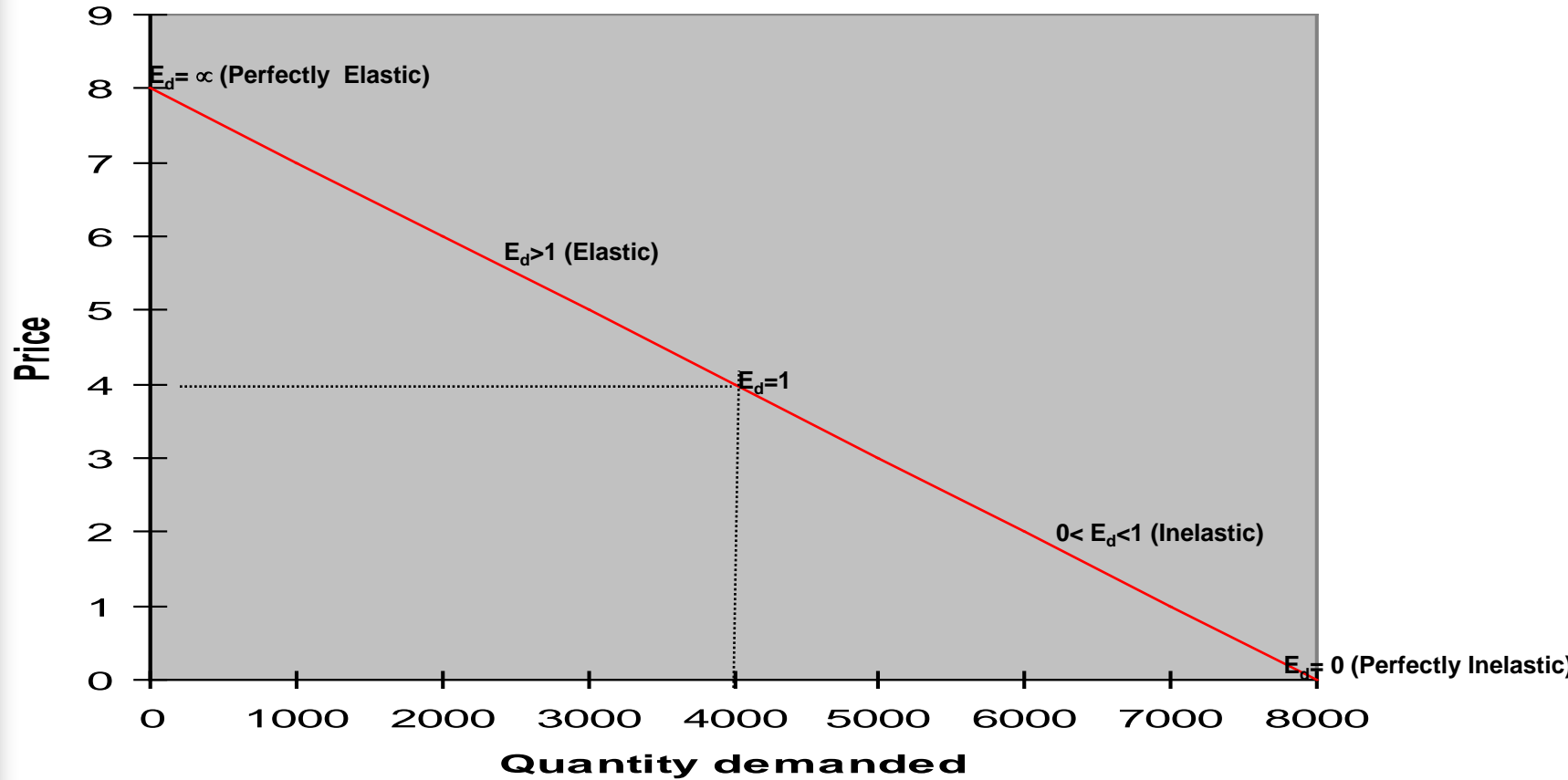




FACTORS INFLUENCING ELASTICITY OF DEMAND

- **Luxury or necessity**
- **Availability of substitutes**
- **Portion of monthly income spend on product**
- **Habit forming products**
- **Durability of products**
- **Time period**

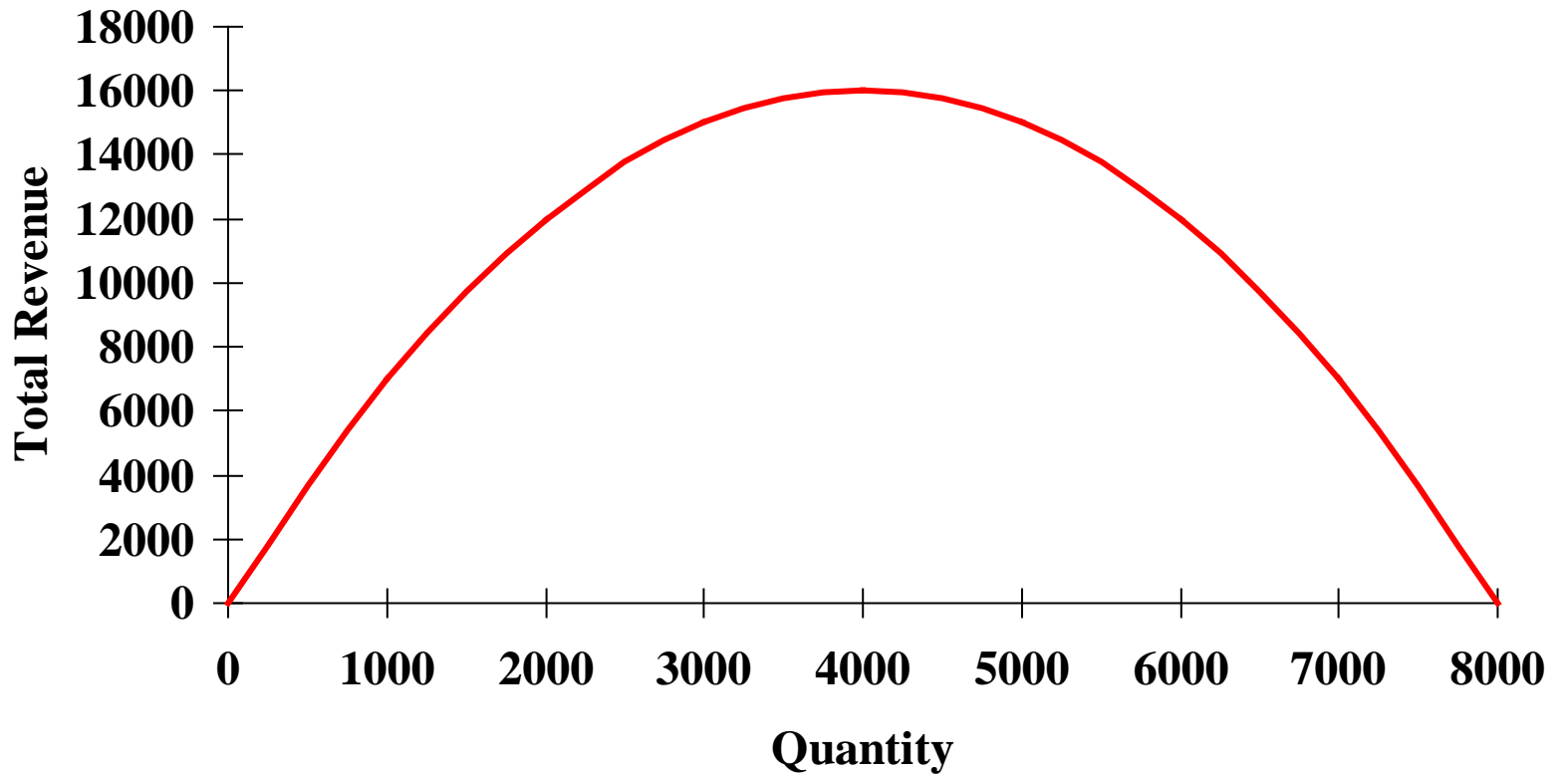
Linear Demand Curve And Elasticity Values



Price, Quantity and Total Revenue

Price	Quantity	TR = P x Q	ELASTICITY VALUE
8	0	0	ED = ∞
7	1000	7000	ED > 1
6	2000	12000	ED > 1
5	3000	15000	ED > 1
4	4000	16000	ED = 1
3	5000	15000	0 < ED < 1
2	6000	12000	0 < ED < 1
1	7000	7000	0 < ED < 1
0	8000	0	ED = 0

THE TOTAL REVENUE CURVE





DEMAND - CONSUMERS

- **Price elasticity and total revenue:**
 - If $E_d > 1$ – product is elastic
 - If $E_d < 1$ – product inelastic
 - If $E_d = 1$ – product unit elastic
- **Draw graphs showing relationship between demand curve and Total revenue.**
 - In elastic section of demand curve – a price decrease leads to an increase in total revenue
 - In inelastic section of demand curve – a price decrease leads to a decrease in total revenue



ELASTICITY OF DEMAND - CONSUMERS

- **Income elasticity of demand:**

- Definition

- Purpose:

- To establish how consumers classify products

- **Inferior products** – Negative income elasticity ($E_y < 0$)

- **Normal products** – Positive income elasticity ($E_y > 0$)

- **Normal products** can be divided in two categories:

- Necessities $0 < E_y < 1$

- Luxury products $E_y > 1$



ELASTICITY OF DEMAND - CONSUMERS

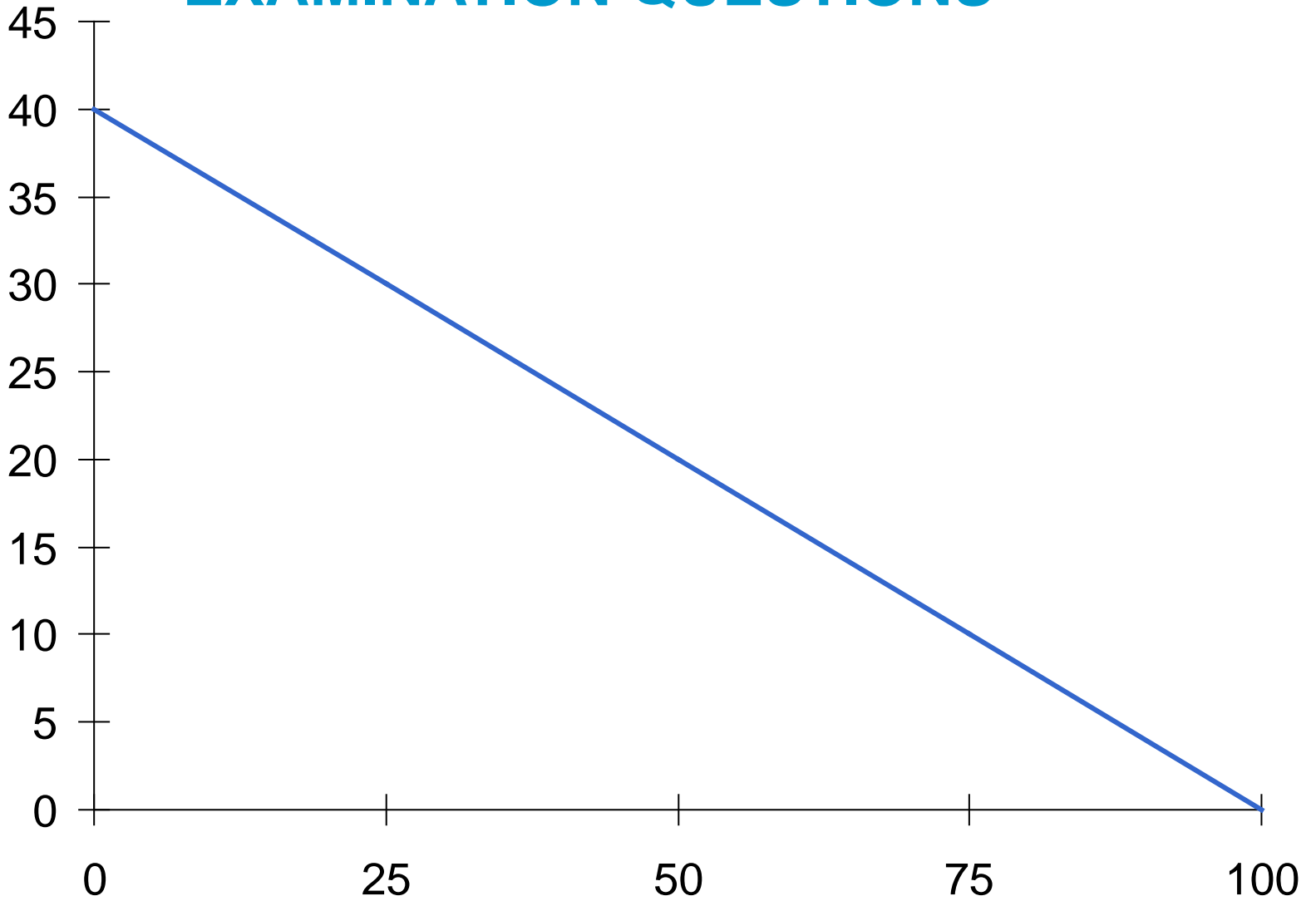
- **Cross elasticity of demand:**

- Definition

- Purpose:

- To establish whether products is a **substitute** or **complement**
 - **Complementary products** – Negative cross elasticity ($E_c < 0$)
 - **Substitute products** – Positive cross elasticity ($E_c > 0$)

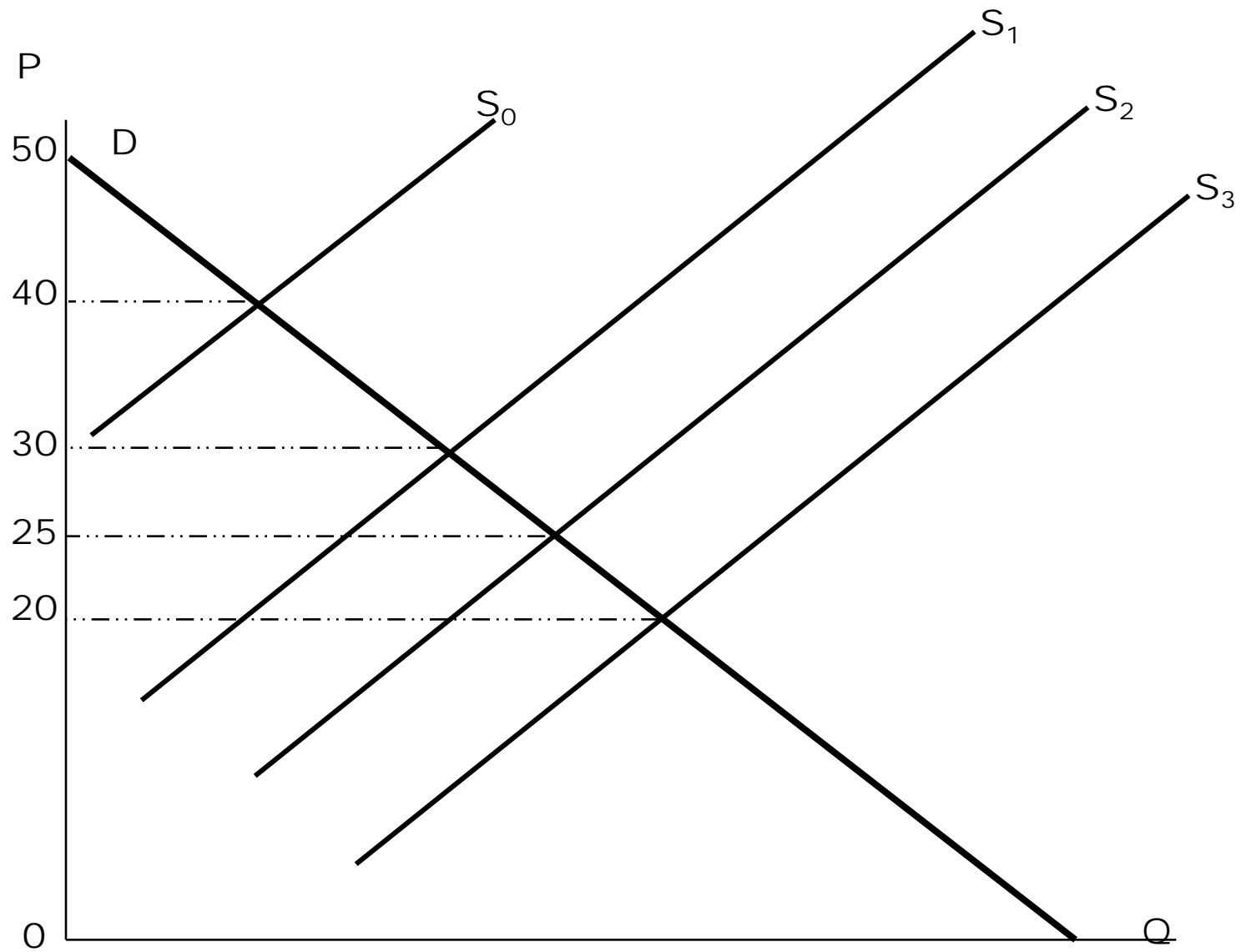
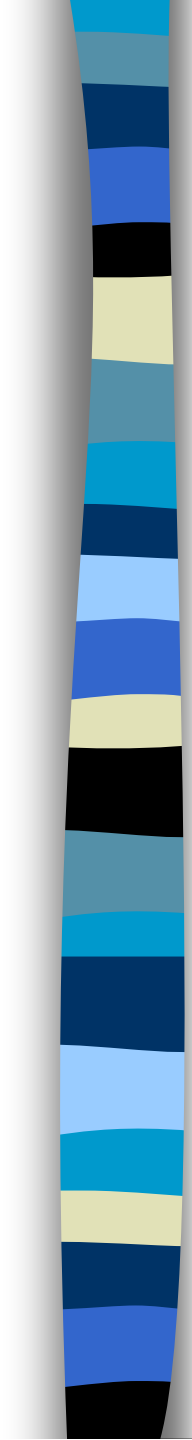
EXAMINATION QUESTIONS





QUESTIONS RELATING TO SLIDE 16

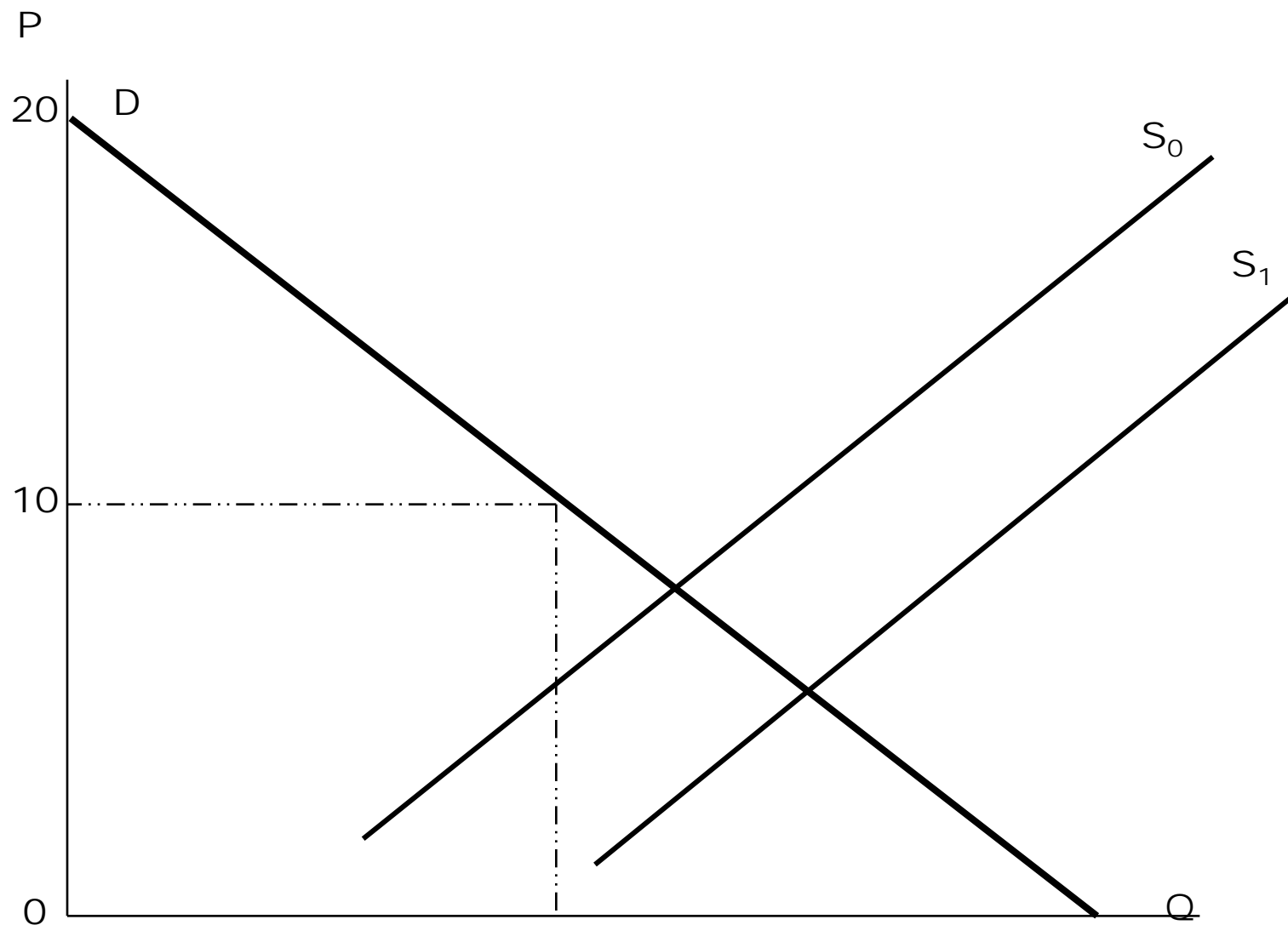
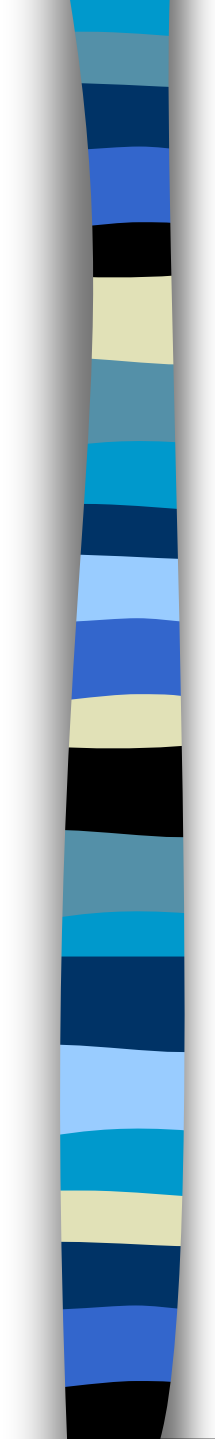
- At which prices is the price elasticity larger than one?
- At which of the provided prices is the elasticity value smaller than one?
- At which price level is the price elasticity equal to 1?
- Suppose the price is R10. What must happen to prices in order to increase the total revenue?
- Suppose the price is R30. What must happen to prices in order to increase the total revenue?





QUESTIONS RELATING TO SLIDE 18

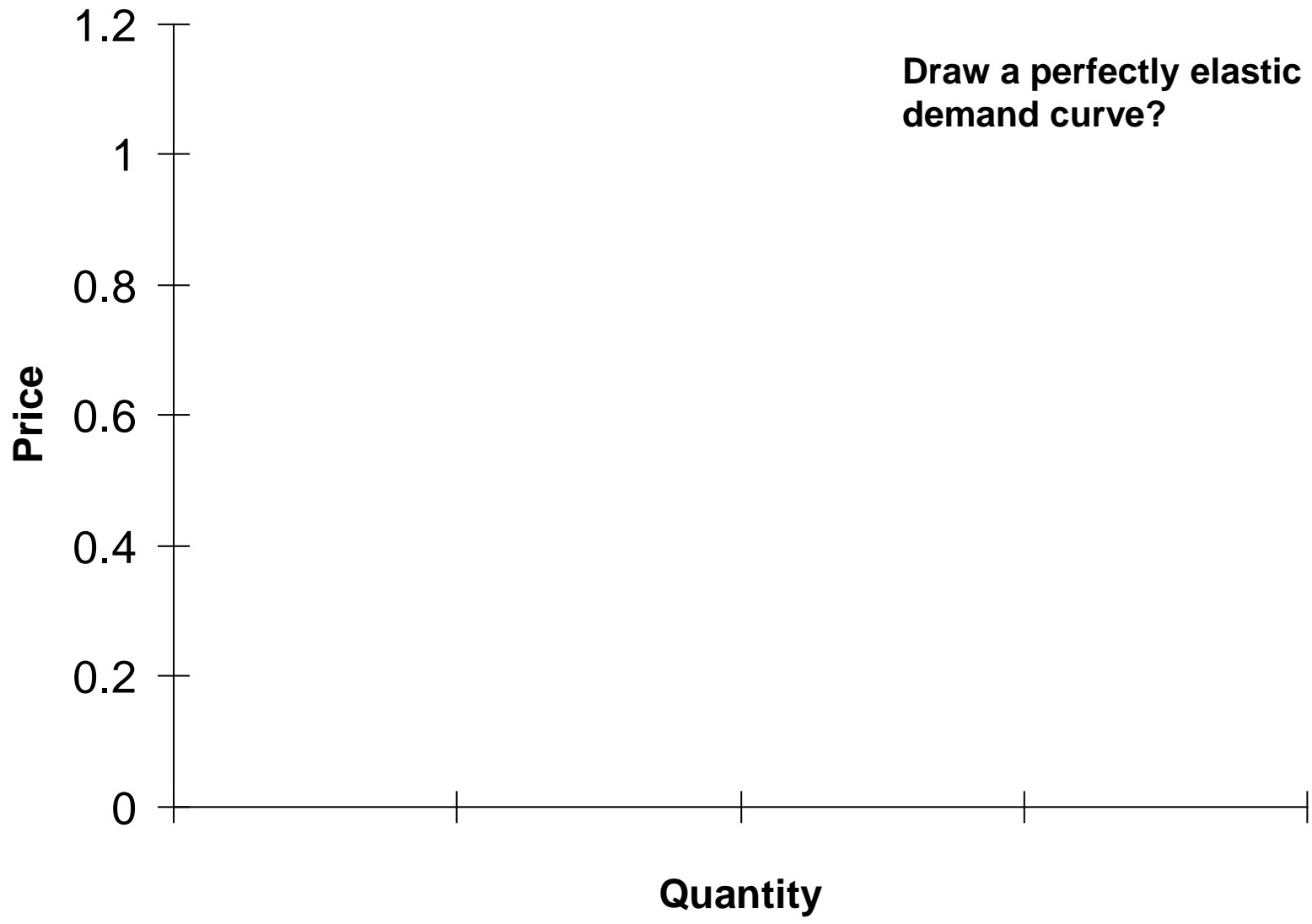
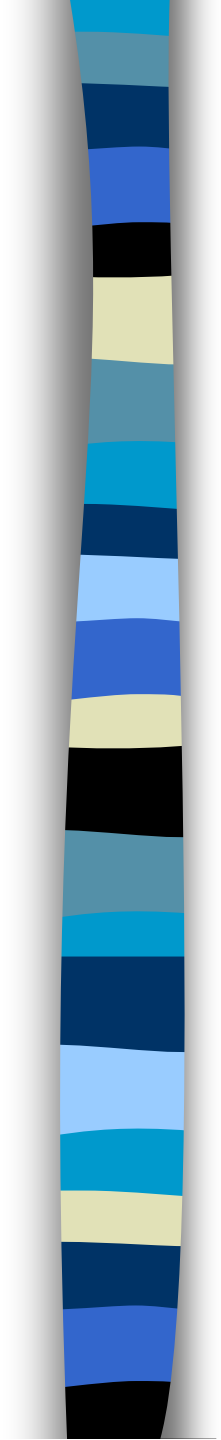
- Suppose the supply of maize increases from S_0 to S_2 ? What happens to total revenue?
- Suppose the supply of maize decreases from S_3 to S_2 ? What happens to total revenue?
- At which price will total revenue be maximised?

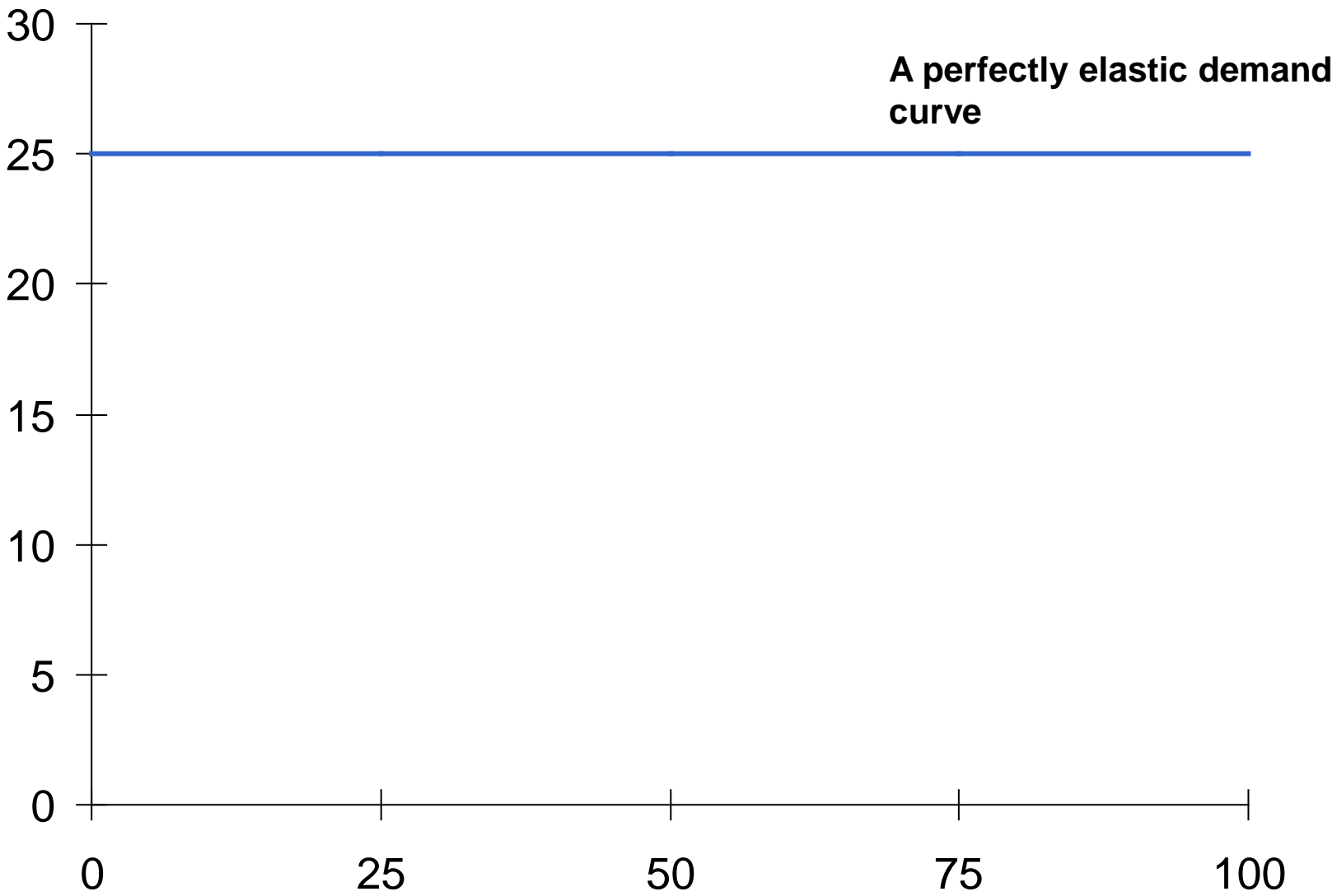
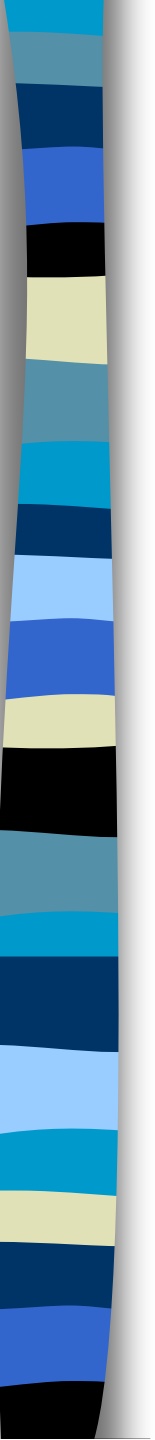


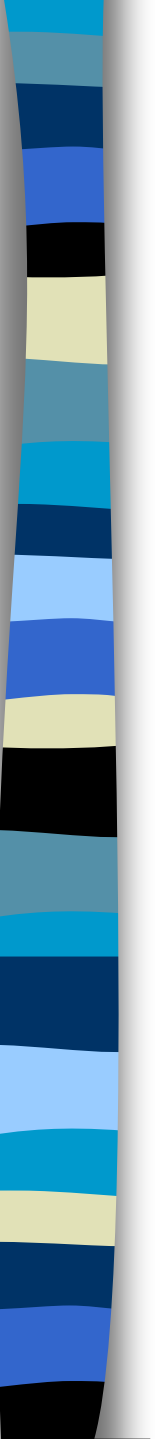


QUESTIONS RELATING TO SLIDE 20

- The quantity of tomatoes sold increased from S_0 in 2006 to S_1 2007. What happened to the total revenue of tomato producers?
- At which price will the total revenue be maximised?

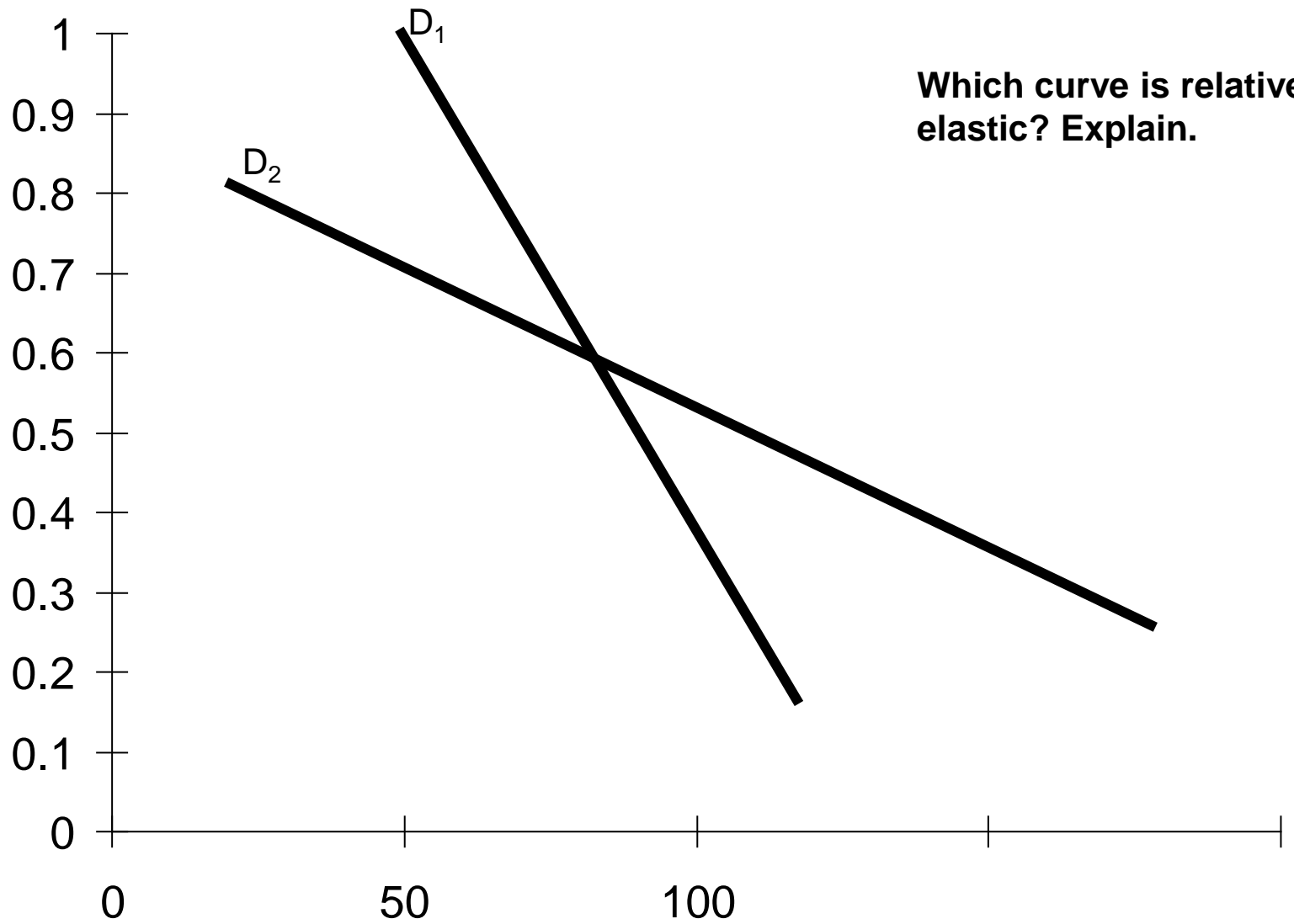
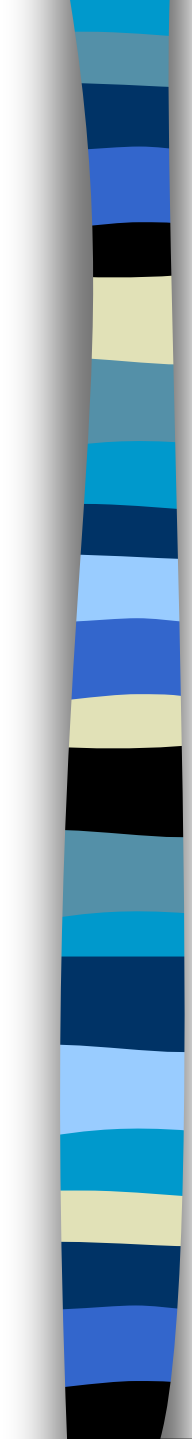






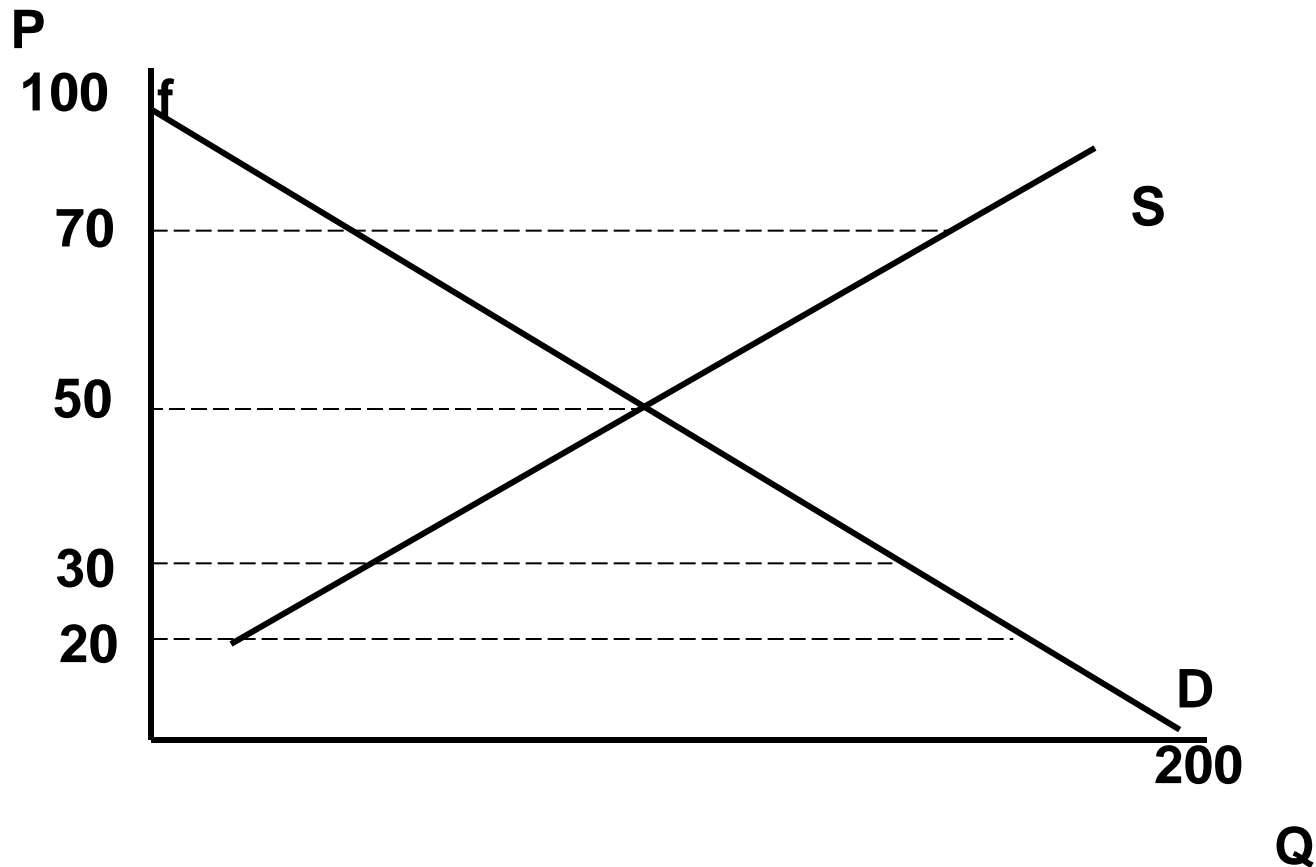
A perfectly inelastic demand curve.

- **What happens to TR if prices increase?**
- **What happens to quantity demanded?**



Which curve is relatively elastic? Explain.

EXAMINATION QUESTION - ELASTICITY





QUESTIONS TO SLIDE 26

- What is the value of price elasticity of demand at Point f?
- At which of the specified prices will total revenue be maximised?