2.6 Price elasticity of demand (PED)

Name: _____ Class: _____ Date: _____ **Total: 16 marks**

KEY WORDS elastic • inelastic • price elasticity of demand • total revenue • elastic and inelastic

Objective

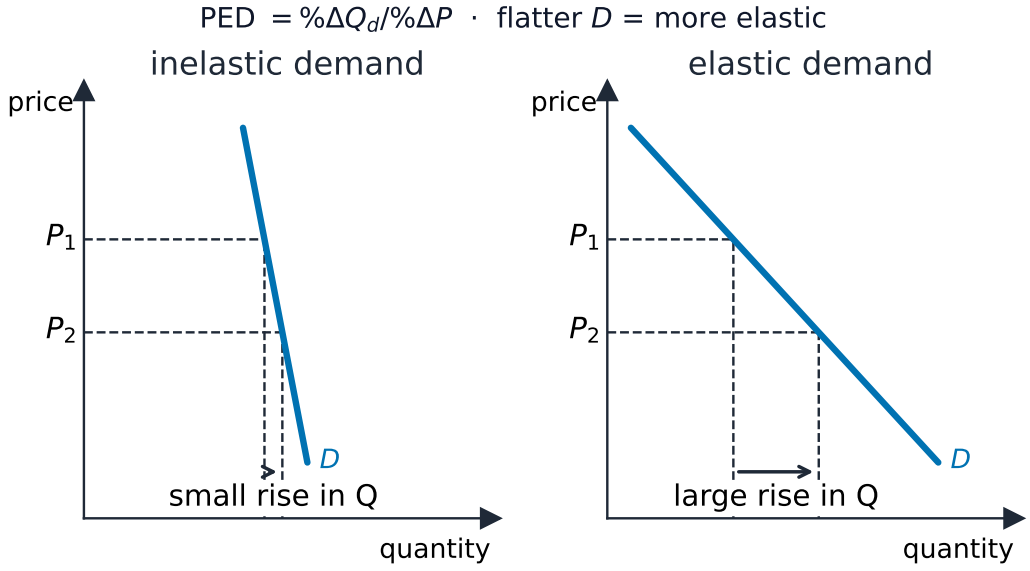
Build the skills to answer exam questions on **price elasticity of demand** (PED) – its formula, **elastic and inelastic** demand, the determinants, and the link with **total revenue** .

You must be able to:

- calculate and interpret PED
- classify demand as elastic or inelastic
- explain the link between PED and total revenue

1 Key knowledge and worked examples

■ Measuring PED



Inelastic: quantity barely moves; elastic: quantity moves a lot

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$$\text{PED} = \frac{\%\text{ change in quantity demanded}}{\%\text{ change in price}}$$

- **Worked:** price +20%, quantity −10% → PED = $\frac{10}{20} = 0.5$ → **inelastic** (<1).
- **Elastic** (>1): many substitutes, a luxury. **Inelastic** (<1): a need, few substitutes (petrol, salt).
- **Revenue:** if demand is inelastic, raising the price **raises** total revenue.

Answer shapes: K + App + An + Ev (a justified judgement, for discuss questions).

2 Practice

2.1 Define *price elasticity of demand (PED).* [2]

2.2 Price rises by 10% and quantity demanded falls by 30%. Calculate the PED and classify the demand. [2]

2.3 State one factor that makes demand for a good elastic. [1]

3 Exam-style questions

3.1 A good has a PED of 0.3. To raise its total revenue, a firm should: [1]

- ☐ **A** lower the price
- **B** raise the price
- **C** keep the price the same
- **D** stop producing it

3.2 Explain why the demand for petrol is price inelastic. [4]

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3.3 Analyse why a government often places taxes on goods with inelastic demand, such as cigarettes. [6]

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Solutions

IGCSE Economics answers are marked by **level of response**: award **K** knowledge, **App** application, **An** analysis and **Ev** a justified judgement.

Each answer shows the steps, then the **result**.

2.1

- **PED** measures how much quantity demanded responds to a change in price (K)
- PED $= \frac{\%\text{ change in quantity demanded}}{\%\text{ change in price}}$

2.2

- quantity demanded falls 30% when price rises 10%

$$\text{PED} = \frac{30}{10} = \mathbf{3}$$

- greater than 1, so demand is **elastic** (K)

2.3

- any **one** of: many **substitutes** / a **luxury** / a **large share of income** (K)

3.1 B

- PED = 0.3 is **inelastic** (< 1) (K)
- raising the price **raises total revenue** (An)
- A would cut revenue; C and D do not raise it

3.2

- petrol is a **necessity** for drivers with few close substitutes (K)
- when its price rises, people still need to drive (An)
- quantity demanded falls only a little $\rightarrow$ demand is **price inelastic** (An)

3.3

- for an inelastic good, a tax **raises the price** but quantity bought falls only a little (K)
- people keep buying and paying the tax $\rightarrow$ the government collects **large, steady revenue** (An)
- it may also slightly reduce smoking (a **demerit good**) (An)