IGCSE ECONOMICS • EXERCISE SHEET

2.6 Price elasticity of demand (PED)

Name: ______________ Class: __________ Date: ____________ **Total: 15 marks**

Objective

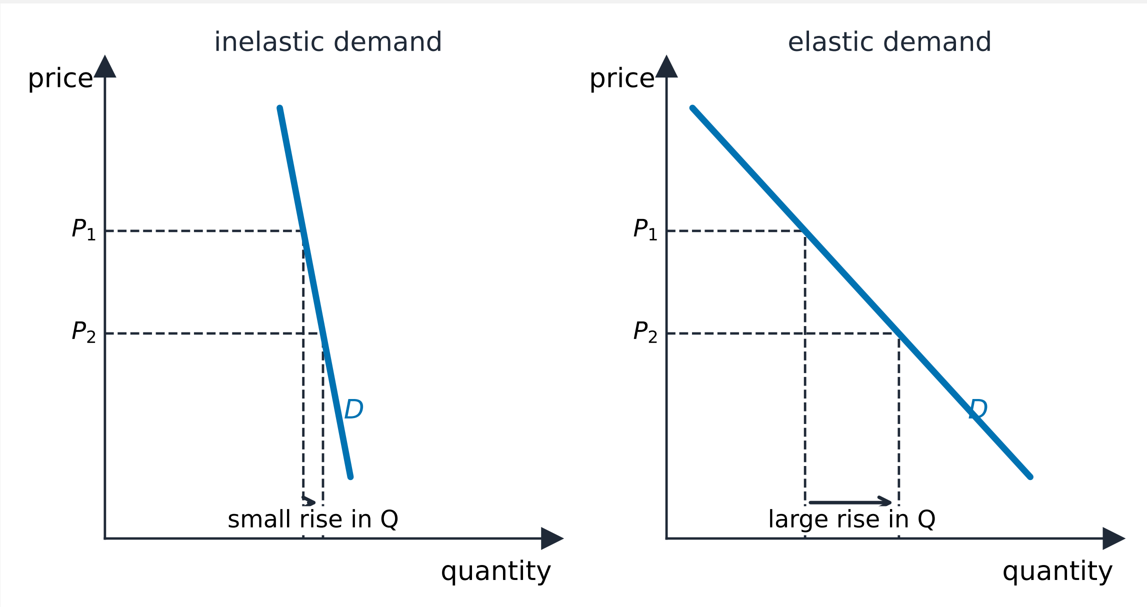
Build the skills to answer exam questions on **price elasticity of demand 需求价格弹性** (PED) —its formula, **elastic and inelastic 富有弹性与缺乏弹性** demand, the determinants, and the link with **total revenue 总收益**.

You must be able to:

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

1 Worked examples

■ Measuring PED



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

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

- **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]

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

4 Go further

You are now ready for the real exam questions on this subtopic. Open the **2.6 Price elasticity of demand (PED)** past-paper sheet in the Library, or try these in **Practice mode**:

- 0455/11 N25 —Q7 (PED)
- 0455/11 J25 —Q7 (elasticity)
- 0455/13 J25 —Q7 (PED and revenue)

Solutions

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

2.1 a measure of how much the quantity demanded responds to a change in price (% change in quantity ÷ % change in price) (2 for a clear definition; 1 for a partial idea).

2.2 PED $= \frac{30}{10} = 3$; greater than 1, so demand is **elastic** (2; award 1 for a correct value with no classification).

2.3 any one of: the good has many substitutes; it is a luxury; it takes a large share of income (1).

3.1 **B**. With PED 0.3 (inelastic), raising the price raises total revenue.

3.2 *[4]* K 1 + An up to 3 —petrol is a necessity for drivers with few close substitutes → when its price rises, people still need to drive → so the quantity demanded falls only a little → demand is price inelastic.

3.3 *[6]* K/App/An —for an inelastic good like cigarettes, a tax raises the price but the quantity bought falls only a little → so people keep buying and paying the tax → the government collects a large, steady amount of revenue → and it may also slightly reduce smoking (a demerit good), achieving two aims.