IGCSE ECONOMICS • EXERCISE SHEET

# 2.6 Price elasticity of demand (PED)

Name: ______________ Class: __________ Date: ____________ **Total: 16 marks**

**KEY WORDS** elastic 富有弹性 • inelastic 缺乏弹性 • price elasticity of demand 需求价格弹性 • total revenue 总收益 • elastic and inelastic 富有弹性与缺乏弹性

## Objective

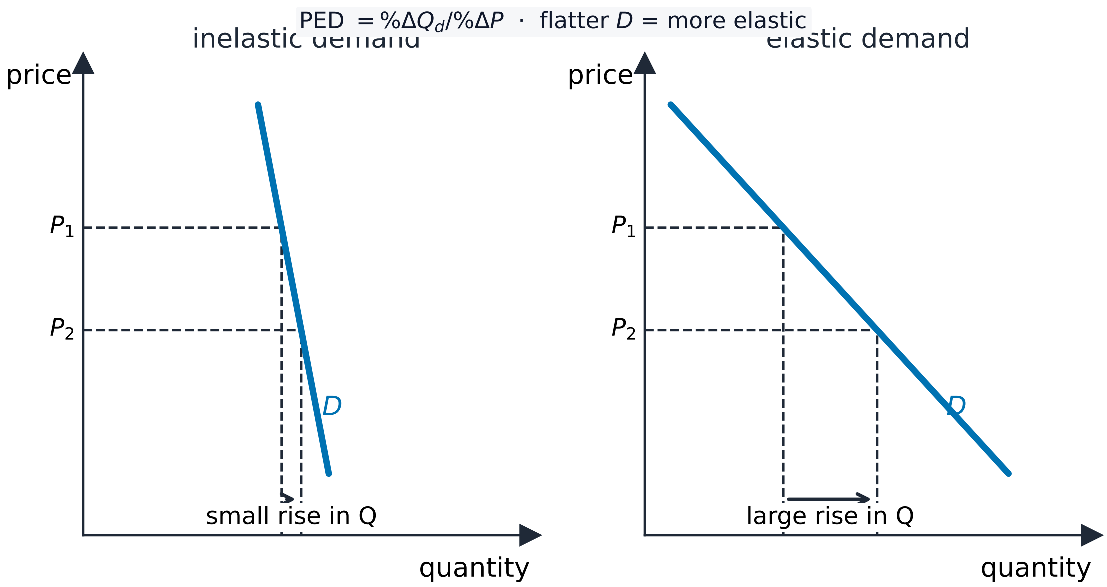
Build the skills to answer exam questions on **price elasticity of demand 需求价格弹性** (PED) — its formula, **elastic and inelastic 富有弹性与缺乏弹性** demand, the determinants, and the link with **total revenue 总收益**.

**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]

## 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.