2.3 Price elasticity of supply

Name: ____________ Class: ________ Date: __________ **Total: 19 marks**

KEY WORDS price elasticity of supply 供给价格弹性 • supply 供给 • price 价格 • short run 短期 • stocks 库存

Objective

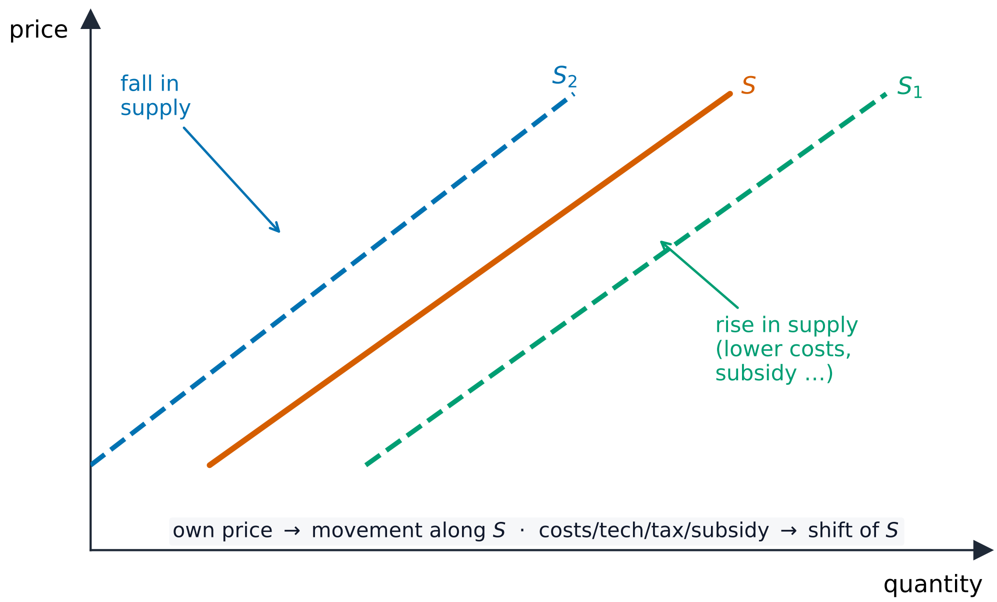
Build the skills to answer exam questions on **price elasticity of supply 供给价格弹性** (PES) — its formula, what makes supply more or less elastic, and the role of **time 时间**.

You must be able to:

- calculate and interpret PES
- explain the determinants of PES (spare capacity, stocks, mobility, time)
- analyse why supply is more elastic in the long run

1 Worked examples

■ Price elasticity of supply



PES measures how strongly quantity supplied responds to a price change

$$\text{PES} = \frac{\%\Delta Q_s}{\%\Delta P}$$

- **Worked:** price +8%, quantity supplied +4% → $\frac{4}{8} = 0.5$ → **inelastic** (<1).
- **More elastic supply when:** there is **spare capacity** 闲置产能, **stocks** 库存, mobile factors, and more time.
- **Time:** momentary (PES = 0) → short run (a little) → long run (most elastic).

Answer shapes: AO1 + AO2 + AO3 (analysis) + AO4 (judgement, for evaluate questions).

2 Practice

2.1 Define *price elasticity of supply (PES).* [2]

2.2 Price rises by 20% and quantity supplied rises by 30%. Calculate the PES and classify the supply. [2]

2.3 State two factors that make supply more elastic. [2]

3 Exam-style questions

3.1 Supply is most likely to be **price inelastic** when: [1]

- **A** firms have spare capacity
- **B** there are large stocks of the good
- **C** the good takes a long time to produce
- **D** factors of production move easily into the industry

3.2 Explain why the supply of a good is usually more elastic in the long run than in the short run. [6]

3.3 Explain, with an example, why the supply of agricultural products is often price inelastic. [6]

Solutions

Economics answers are marked by **level of response** against the assessment objectives: award **AO1** knowledge, **AO2** application, **AO3** analysis and **AO4** evaluation.

2.1 a measure of how much the quantity supplied responds to a change in price, equal to $\%\Delta Qs \div \%\Delta P$ (2 for a clear definition; 1 for a partial idea).

2.2 PES $= \frac{+30}{+20} = +1.5$; greater than 1, so supply is **elastic** (2; award 1 for a correct value with no classification).

2.3 any two of: spare capacity; large stocks; easily mobile factors of production; more time (1 + 1).

3.1 **C**. A long production time makes supply slow to respond, so it is inelastic.

3.2 *[6]* AO1 1 + AO3 up to 5 — in the short run at least one factor is fixed, so firms can increase output only a little when price rises; in the long run all factors can be varied (new machines, more workers, new firms enter) → output can respond fully → supply is more elastic.

3.3 *[6]* AO1 1 + AO2/AO3 up to 5 — crops take a growing season to produce, so a price rise cannot raise this year's output (momentary/short-run supply is fixed); farmers also cannot store some perishable goods → quantity supplied responds little to price → supply is inelastic.