A-LEVEL ECONOMICS • EXERCISE SHEET

2.5 Consumer and producer surplus

Name: ____________ Class: ________ Date: __________ **Total: 21 marks**

KEY WORDS consumer surplus 消费者剩余 • producer surplus 生产者剩余 • consumer and producer surplus 消费者剩余与生产者剩余 • consumer 消费者 • producer 生产者

Objective

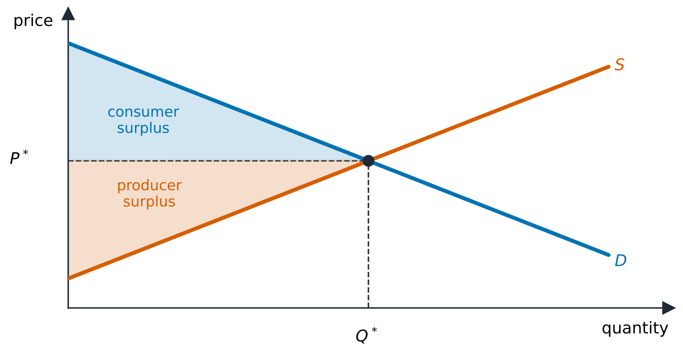
Build the skills to answer exam questions on **consumer and producer surplus 消费者剩余与生产者剩余** — what each is, how to show them on a diagram, and how they change.

You must be able to:

- define and shade **consumer surplus 消费者剩余** and **producer surplus 生产者剩余**
- explain how a price or curve change affects each surplus
- analyse surplus as a measure of welfare 福利

1 Worked examples

■ The two surpluses



total surplus $= CS + PS$ maximised at competitive equilibrium (P^*, Q^*)

Together they measure the total welfare 福利 from a market

- **Consumer surplus:** the gap between the most a buyer would pay and the price actually paid (area **below demand, above price**).
- **Producer surplus:** the gap between the price received and the lowest a seller would accept (area **above supply, below price**).
- A **higher price** raises producer surplus but lowers consumer surplus; a **rise in supply** lowers price → raises consumer surplus.

Answer shapes: an **Explain** [**up to 8**] answer should use a labelled diagram (AO3); **Discuss** [**12**] adds a judgement (AO4).

2 Practice

2.1 Define the term *consumer surplus.* [2]

2.2 State where **producer surplus** is shown on a demand and supply diagram. [1]

2.3 State the effect on consumer surplus of a fall in the market price. [1]

3 Exam-style questions

3.1 Consumer surplus is the area: [1]

- **A** above the demand curve and below the price
- **B** below the demand curve and above the price
- **C** above the supply curve and below the price
- **D** below the supply curve and above the price

3.2 Using a diagram, explain how an increase in supply affects consumer surplus. [8]

3.3 Discuss whether a rise in the market price always reduces total welfare. [8]

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 the difference between the most a consumer is willing to pay and the price actually paid (2 for a clear definition; 1 for a partial idea).

2.2 the area above the supply curve and below the price line (1).

2.3 consumer surplus rises (1).

3.1 B. Consumer surplus is below the demand curve and above the price.

3.2 *[8]* AO1 1 + **AO3 diagram up to 4** (demand and supply, supply shifts right, price falls) + AO2/AO3 up to 3 — a rise in supply lowers the equilibrium price and raises quantity → the area below demand and above the new lower price is larger → consumer surplus rises.

3.3 *[8]* AO1/AO2/AO3 up to 5 + AO4 up to 3. **Yes:** a higher price (curves fixed) cuts consumer surplus and quantity traded, lowering welfare. **But:** producer surplus rises, and if the price rise came from higher demand, total welfare can still rise as more is traded. Judgement: the effect on total welfare depends on *why* the price rose — a tax or restriction lowers welfare, but a demand-led rise need not.