Exercise walk-through

The interaction of demand and supply ▪ 2.4

eXercise

You must be able to

- draw and explain market equilibrium
- explain excess demand (shortage) and excess supply
- analyse how a shift in demand or supply changes price and quantity

Method — Market equilibrium

Equilibrium P^*, Q^*: quantity demanded = quantity supplied

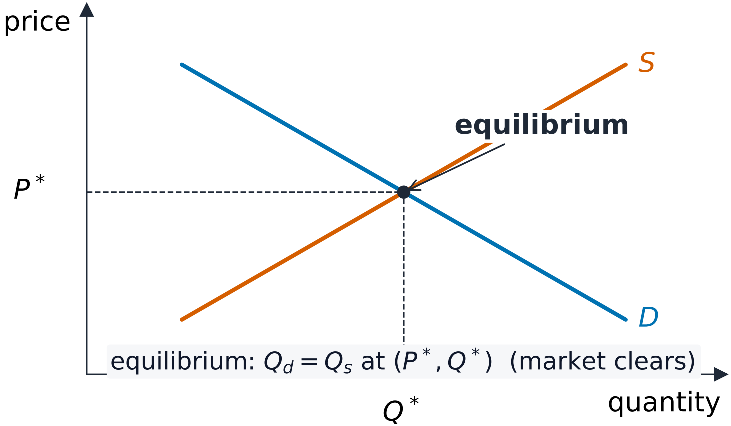
- **Equilibrium 均衡**: where demand crosses supply — no pressure for price to change.
- **Too low a price** → **excess demand 超额需求** (a shortage) → price pushed up.
- **Too high a price** → **excess supply 超额供给** → price pushed down.

Disequilibrium: excess supply (above P^*) and excess demand (below P^*)

- **Shifts:** demand right → price ↑, quantity ↑; supply right → price ↓, quantity ↑.

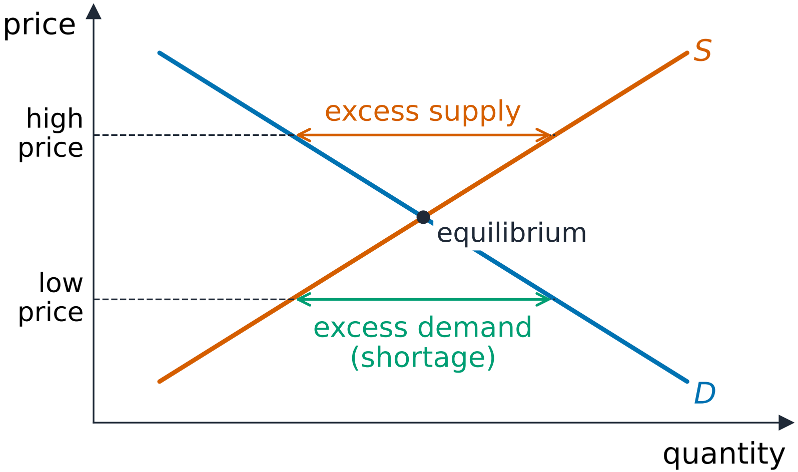
Answer shapes: an **Explain [up to 8]** answer should use a labelled diagram (AO3); **Discuss [12]** adds a judgement (AO4).

Method — Market equilibrium

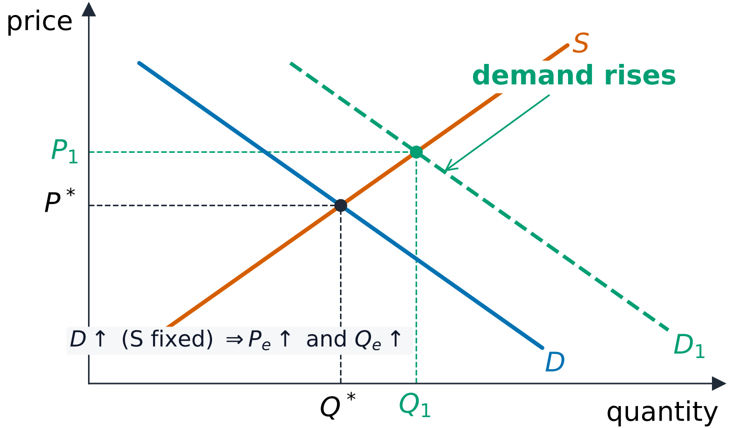


At the equilibrium price and quantity the curves cross, so demand equals supply

Method — Market equilibrium



Method — Market equilibrium



A rise in demand shifts the curve right, raising both the equilibrium price and quantity

Practice 2.1 ▪ 2 marks

Define the term *equilibrium price*.

Solution 2.1

Method: Market equilibrium

Worked steps

the price at which the quantity demanded equals the quantity supplied, so there is no pressure for it to change (2 for a clear definition; 1 for a partial idea).

Practice 2.2 ▪ 1 mark

State what happens to price when there is **excess demand**.

Solution 2.2

Method: Market equilibrium

Worked steps

the price rises (2 for “rises, because buyers compete for the shortage”; 1 for “rises”).

Practice 2.3 ▪ 2 marks

State the effect on equilibrium price and quantity of a rightward shift in supply.

Solution 2.3

Method: Market equilibrium

Worked steps

price falls and quantity rises $(1 + 1)$.

Exam-style 3.1 ▪ 1 mark

A price set **below** the equilibrium price will cause:

A excess supply, pushing price down

B excess demand, pushing price up

C the market to stay in equilibrium

D the supply curve to shift left

Solution 3.1

Method: Market equilibrium

A excess supply, pushing price down

B excess demand, pushing price up ✓

C the market to stay in equilibrium

D the supply curve to shift left

Worked steps

B. Below equilibrium there is excess demand, which pushes the price up.

Exam-style 3.2 ▪ 8 marks

Using a demand and supply diagram, explain how an increase in demand changes the equilibrium price and quantity.

Solution 3.2

Method: Market equilibrium

Worked steps

[8] AO1 1 + **AO3 diagram up to 4** (labelled axes, demand shifts right $D \to D_1$, new equilibrium) + AO2/AO3 up to 3 — higher demand creates excess demand at the old price $\to$ the price is bid up $\to$ as price rises, quantity supplied rises along the supply curve $\to$ a new equilibrium at a higher price and higher quantity.

Exam-style 3.3 ▪ 12 marks

The price of coffee beans (an input) rises sharply. Discuss the likely effects on the market for coffee.

Solution 3.3

Method: Market equilibrium

Worked steps

[12] AO1/AO2/AO3 up to 8 (diagram: supply shifts left, price $\uparrow$, quantity $\downarrow$) + AO4 up to 4. **Analysis:** dearer beans raise production costs $\rightarrow$ supply of coffee shifts left $\rightarrow$ equilibrium price rises and quantity falls; how much depends on PED. **Evaluation:** if demand for coffee is inelastic, the price rises a lot but quantity falls little; producers of complements (e.g. milk) may lose; consumers may switch to substitutes. Judgement: the size of the effect depends on elasticities and whether the cost rise is temporary.