Solutions

2.1

- $900 - 50P = 100 + 50P$ gives $800 = 100P$.
- $P^* = £8$, $Q^* = 500$ cups.
- At £5: $Q_d = 650$, $Q_s = 350$.
- **Shortage of 300 cups.**

2.2

- $1000 - 50P = 100 + 50P$.
- $P^* = £9$, $Q^* = 550$.
- Price AND quantity rose together.
- The signature of a demand shift along an upward supply.

2.3

- $900 - 50P = 200 + 50P$.
- $P^* = £7$, $Q^* = 550$.
- Quantity rose but the price FELL.
- The supply-shift signature.

2.4

- $1000 - 50P = 200 + 50P$ gives $P^* = £8$, $Q^* = 600$.
- The two shifts push the price in opposite directions by equal amounts ($\pm£1$ here), so they cancel.
- The quantity gains add.

2.5

- (a) i – a price change moves along the curves.
- (b) ii – tastes shift demand.
- (c) iii – more sellers shift supply.
- (d) iii – an input price shifts supply.
- (e) ii – a cheaper substitute shifts demand for coffee left.

2.6

- A ceiling at £5 holds the price below the £8 equilibrium.
- Buyers plan 650 while carts offer 350: the 300-cup shortage turns into queues and rationing instead of a higher price.
- The equilibrium price did not fall from greed; it sits where the plans agree.