Walrasia

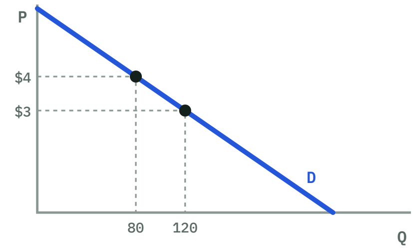
Why does the price stop there?

One market, two curves, one price: ice cream cones on a busy beach.

1 Demand

the buyers

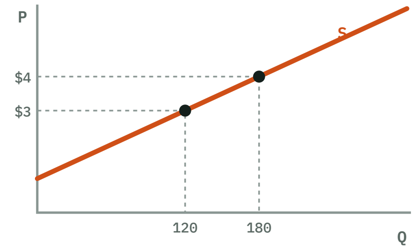
- **Demand curve** → how much buyers want at each price. Slopes **down**.
- **Law of demand** → price ↑ ⇒ quantity demanded ↓
- Beach: `Demand = 240 − 40P` → at $3, 120 cones/hour
- **demand** = the whole curve · **quantity demanded** = one point



2 Supply

the sellers

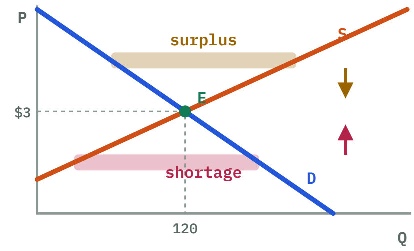
- **Supply curve** → how much sellers offer at each price. Slopes **up**.
- **Law of supply** → price ↑ ⇒ quantity supplied ↑
- Beach: `Supply = 60(P − 1)` → nothing at $1, +60 per extra $1
- **supply** = the whole curve · **quantity supplied** = one point



3 Equilibrium

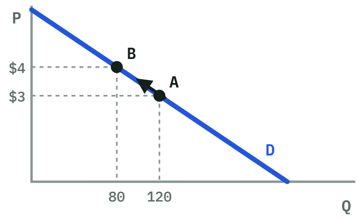
where they meet

- **Quantity demanded = quantity supplied** → **$3** and **120** cones/hour
- Price too high → SURPLUS unsold cones → price falls ↓
- Price too low → SHORTAGE queues → price rises ↑
- Nobody decides it: the **invisible hand** (Adam Smith)
- `240 − 40P = 60P − 60` → `300 = 100P` → `P = 3` → `Q = 240 − 120 = 120`

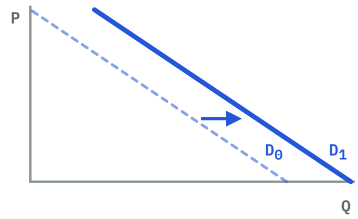


4 Move or shift?

the key question



The good's own price changes
→ move **along** the curve
→ change in **quantity demanded**



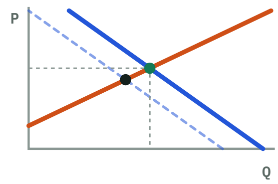
Anything else changes
→ the **whole curve** shifts
→ change in **demand**

DEMAND SHIFTERS weather · tastes · income · price of related goods (popsicles) · number of buyers

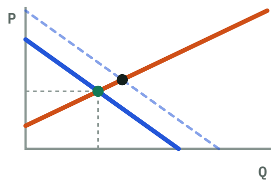
SUPPLY SHIFTERS input costs (cream) · technology · number of shops

5 After a shift

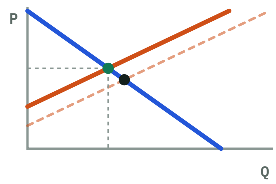
four cases



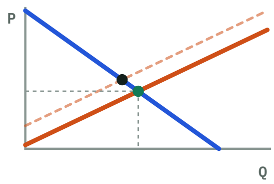
Demand ↑ heatwave
P ↑ Q ↑ · $3.50, 150



Demand ↓ rainy day
P ↓ Q ↓ · $2.50, 90



Supply ↓ cream costs more
P ↑ Q ↓ · $3.50, 100

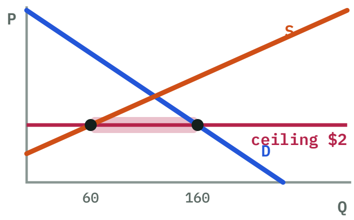


Supply ↑ faster machine
P ↓ Q ↑ · $2.50, 140

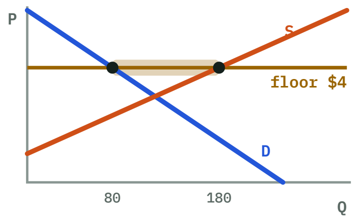
More cones sold ≠ supply shifted. In the heatwave only demand moves; the shops move **along** the same supply curve (120 → 150).

6 Price controls

rules on the price



Price ceiling = legal maximum
below $3 → SHORTAGE
at $2: want 160, offered 60 → 100 short



Price floor = legal minimum
above $3 → SURPLUS
at $4: want 80, offered 180 → 100 unsold