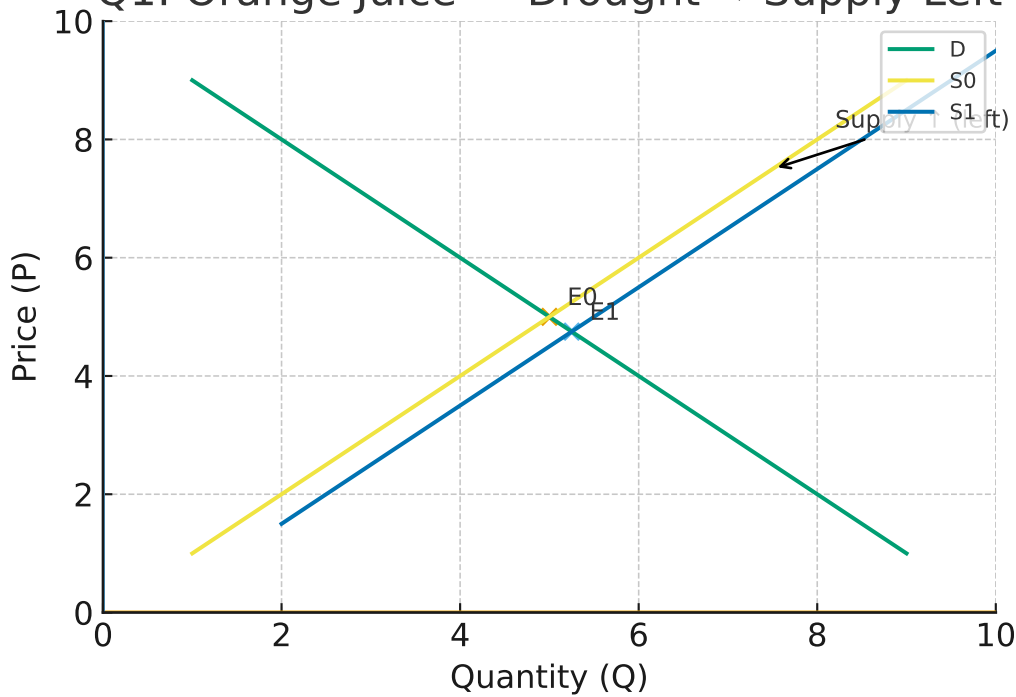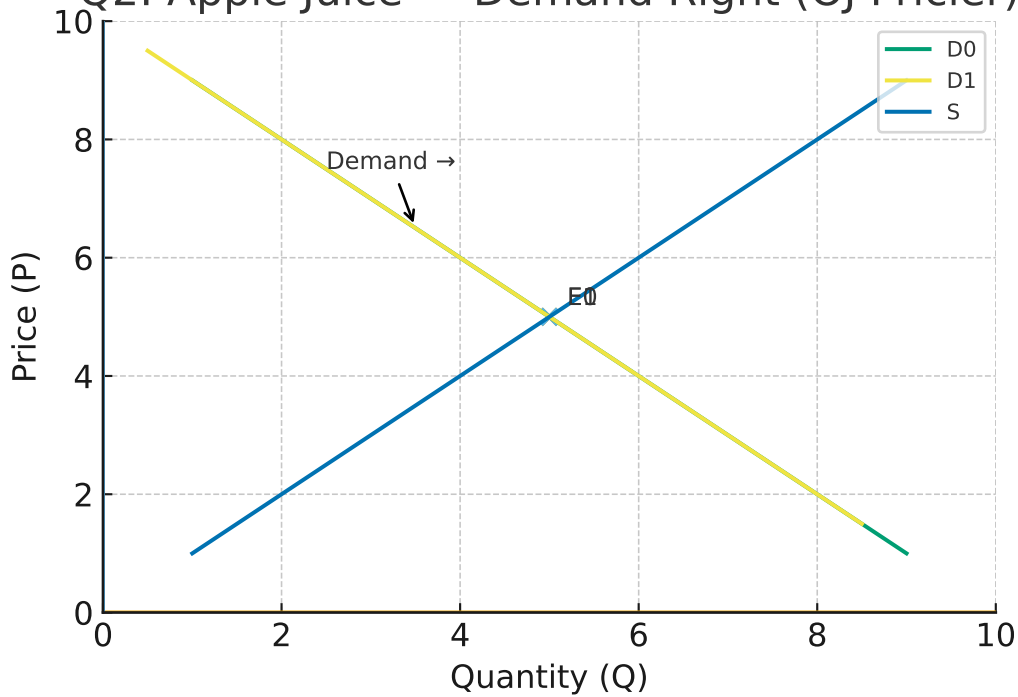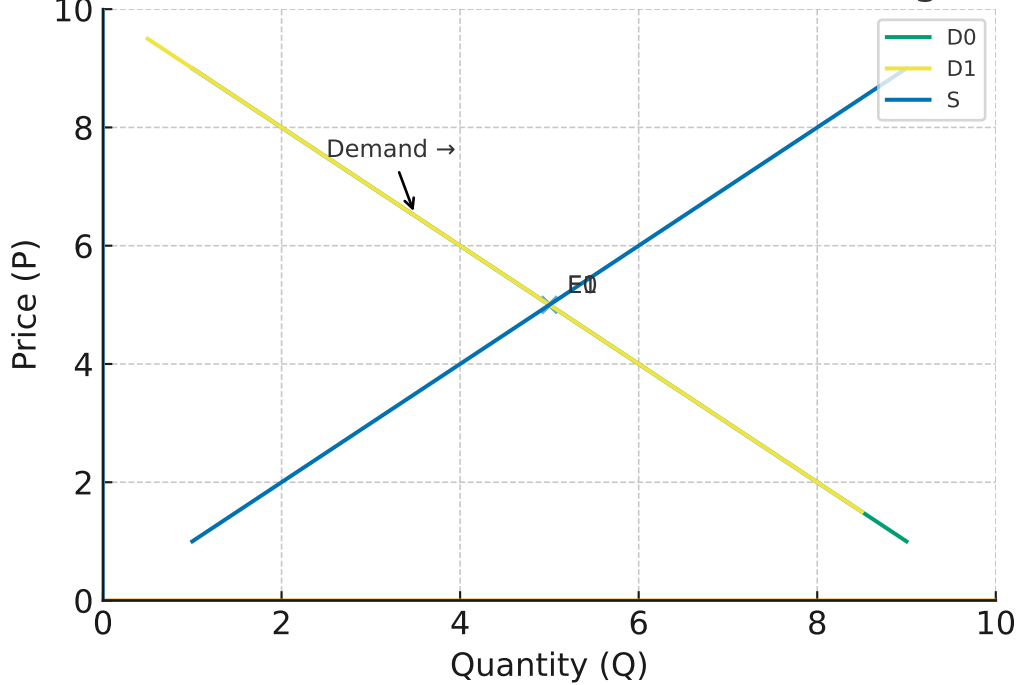Q1: Orange Juice — Drought → Supply Left

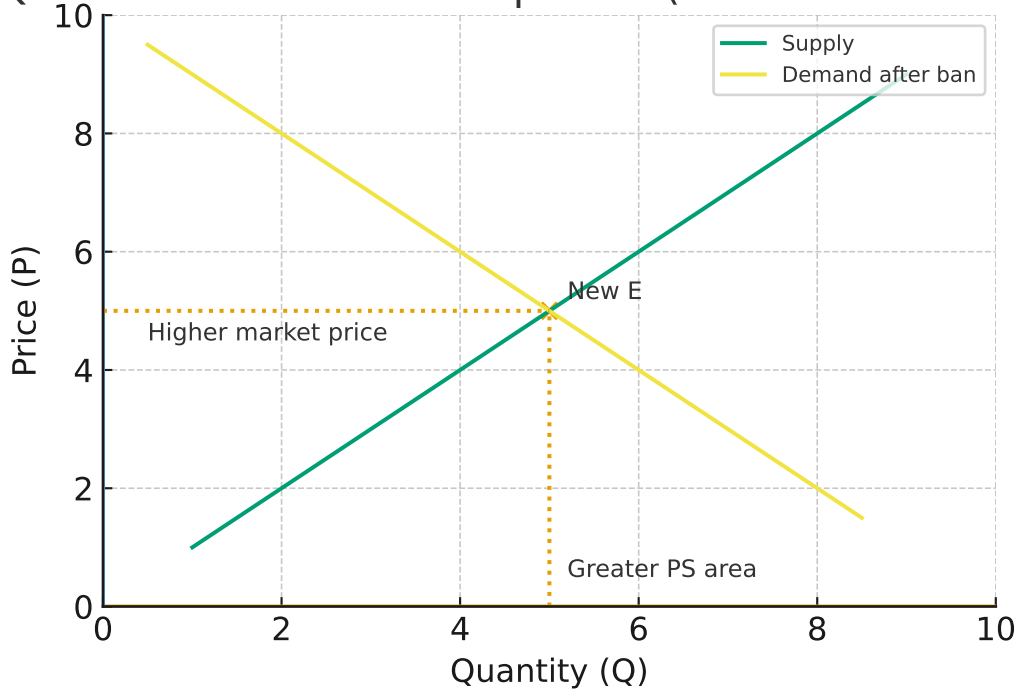Q2: Apple Juice — Demand Right (OJ Pricier)

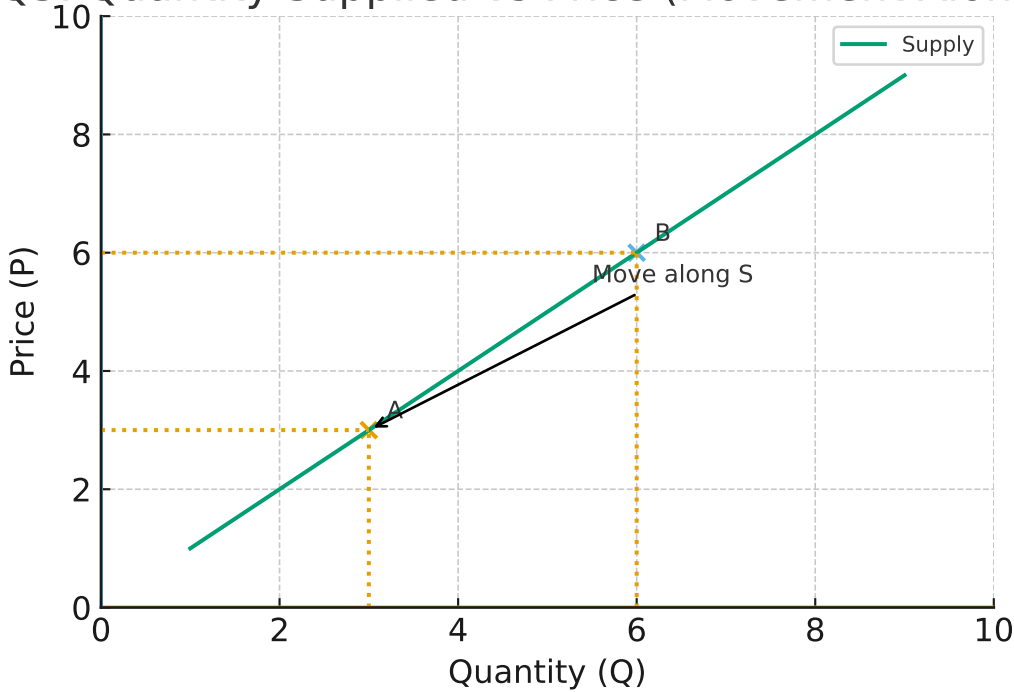Q3: Coffee — Soda Ban → Demand Right

Demand →

E0

Q4: Coffee Producer Surplus ↑ (after demand right)

Legend:
- Supply
- Demand after ban

New E

Higher market price

Greater PS area

Q5: Quantity Supplied vs Price (Movement Along S)

Q6: Supply Curve vs Quantity Supplied

Price change
shifts point,
not the curve

Supply (unchanged)

Price (P)
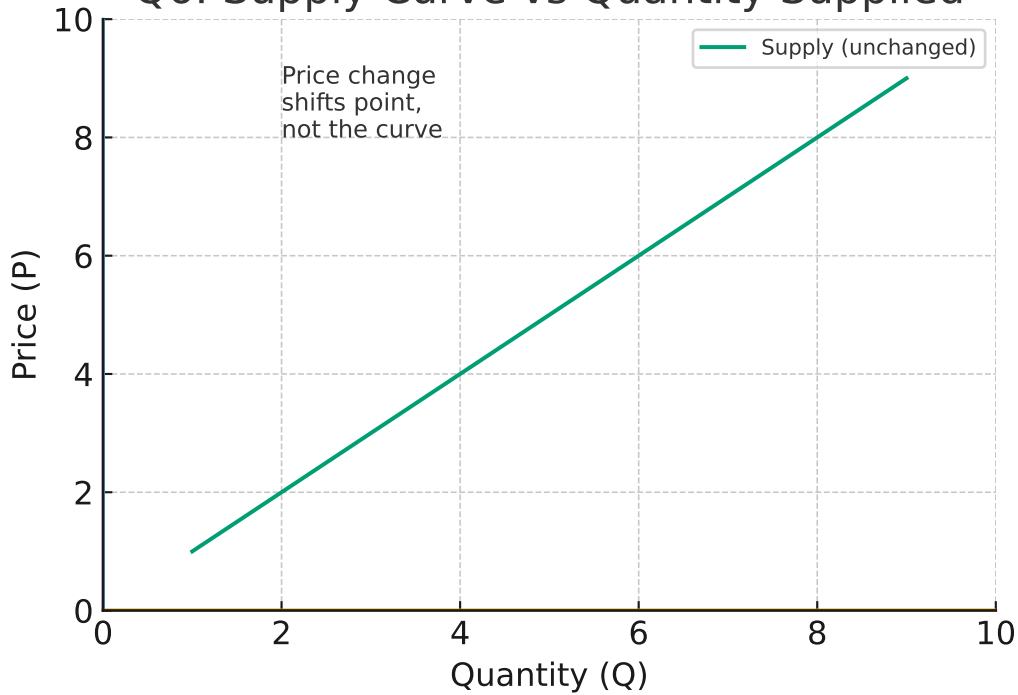
Quantity (Q)

Q7: Gas Tax — Upward Supply Shift

Demand
Supply S0
Supply S1 (tax)

E ΔP to buyers
E0 (≤ tax)

Price (P)

Quantity (Q)

Q8: Cigarettes — %ΔQ = ε × %ΔP

Given: ε = -0.3, %ΔP = +15%
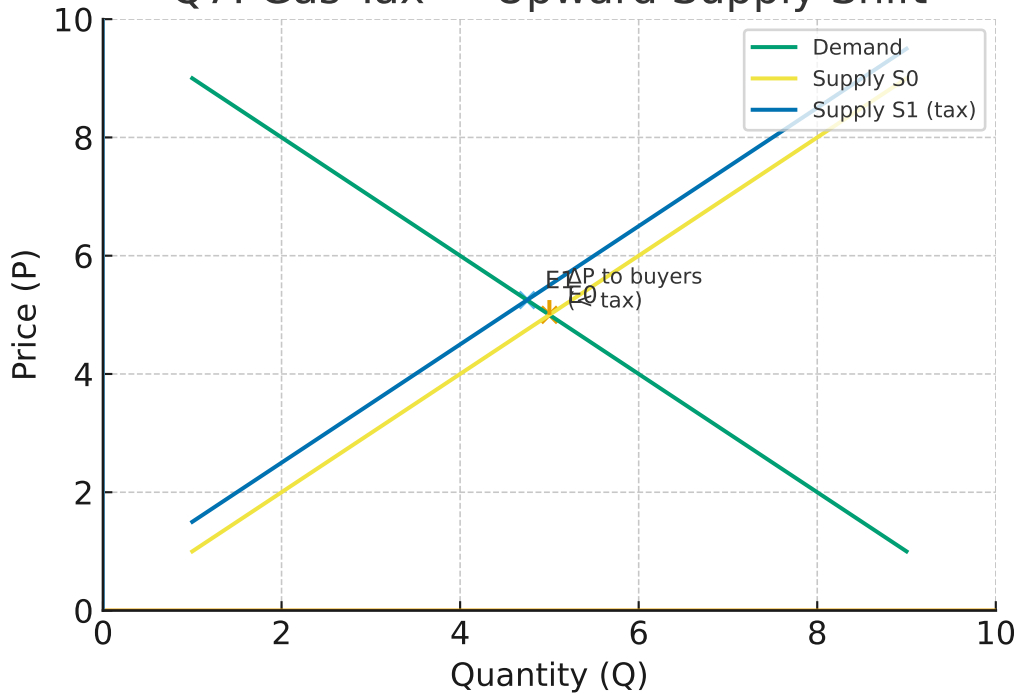
%ΔQ = ε × %ΔP = (-0.3)(15%) = -4.5%

Interpretation: Quantity falls by 4.5%.

Q9: Elasticity at q=40 for Q=100-20p

Demand: Q = 100-20P/20 = 3.0
At q=40, P= -(20)×(3.0/40) = -1.50
Elasticity: E = -(20)×(3.0/40) = -1.50
Interpretation: Elastic (|E|>1)

Q10: Revenue effect near Q=40 (Elastic)

Since |E| > 1 at Q=40, demand is elastic.
Small ↓ in price ⇒ %ΔQ > |%ΔP| ⇒ Revenue (P×Q) rises.

Q11: Elasticity at P=2 for Q=100-20P

Demand: Q = 100 - 20P, 60

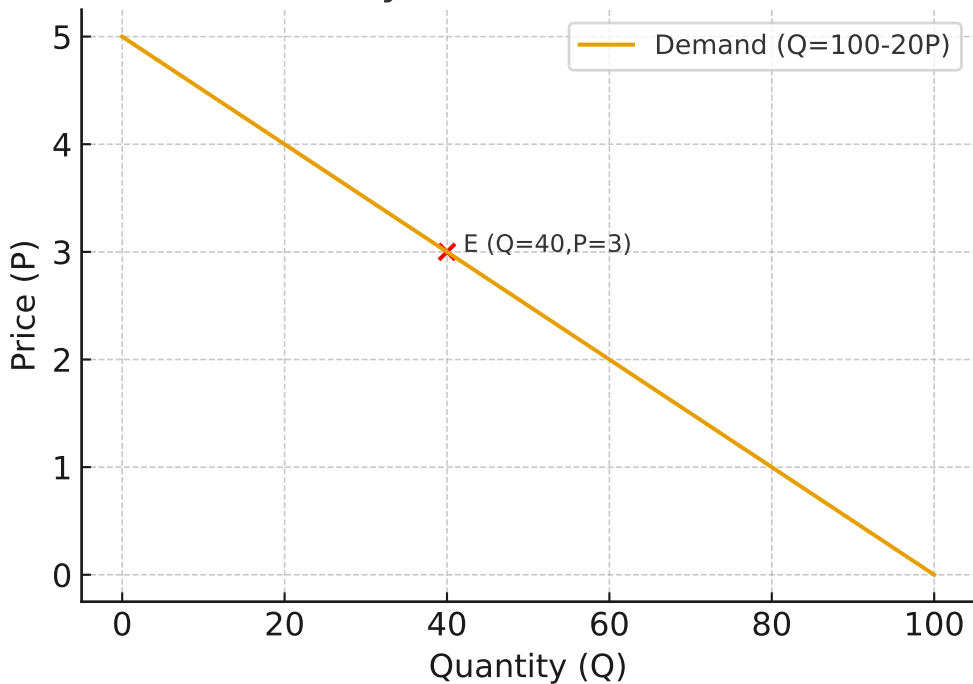Point elasticity: E = dQ/dP × (P/Q)

E = -20 × 2/60 = -0.667

Interpretation: Inelastic (|E|<1).

Q12: Revenue effect near P=2 (Inelastic)

Since |E| < 1 at P=2, demand is inelastic.
Small ↑ in price ⇒ |%ΔQ| < %ΔP ⇒ Revenue (P×Q) rises.

Q13: Pricing with $\varepsilon = -0.5$ to raise Q by 10%

Given $\varepsilon = -0.5$, Q: 1000 → 1100 ⇒ %ΔQ = +10%

%ΔP = %ΔQ / ε = 10% / (-0.5) = -20%

New price = 10 × (1 - 0.20) = 8

Q9: Elasticity at Q=40 for Q=100-20P

E (Q=40,P=3)

Demand (Q=100-20P)

Q10: Revenue Effect (Elastic Region)

Since $|E| > 1$ at Q=40, demand is elastic.

Small ↓ in price ⇒ %ΔQ > |%ΔP| ⇒ Revenue (P×Q) rises.

Interpretation: Elastic region → price cuts raise revenue.

Q11: Elasticity at P=2 for Q=100-20P

Demand (Q=100-20P)

E (P=2,Q=60)
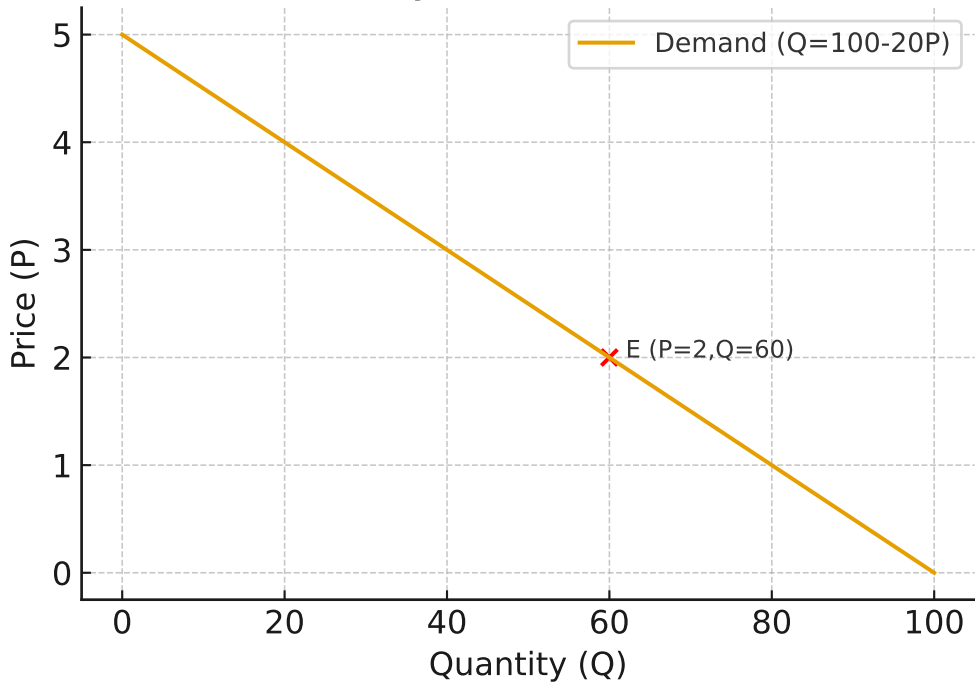
Q12: Revenue Effect (Inelastic Region)

Since $|E| < 1$ at P=2, demand is inelastic.

Small ↑ in price ⇒ $|\%\Delta Q| < \%\Delta P$ ⇒ Revenue (P×Q) rises.

Interpretation: Inelastic region → higher prices raise revenue.