

- 2 Consumers

$$A: q_A = 10 - p \rightarrow p = -q_A + 10$$

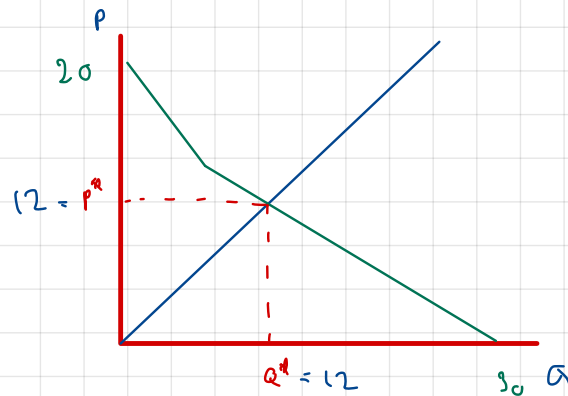
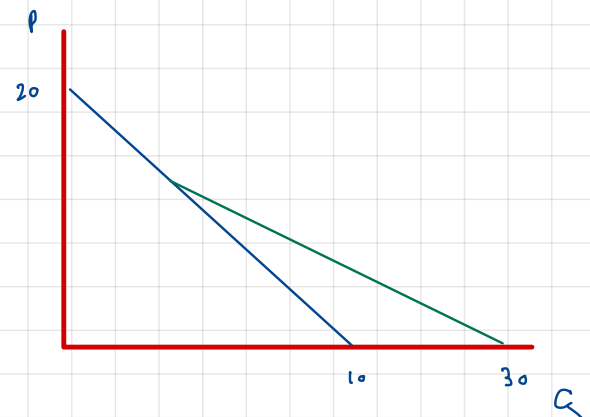
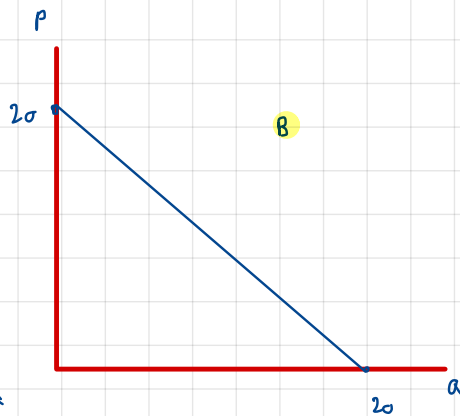
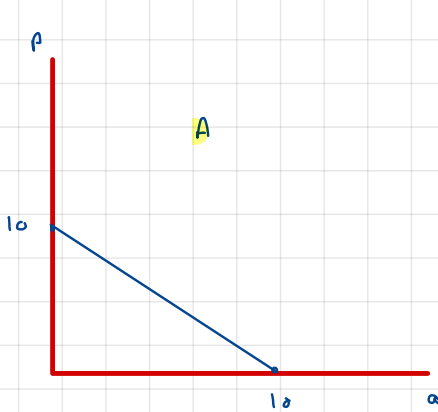
$$B: q_B = 20 - \frac{1}{2}p \rightarrow p = -2q_B + 40$$

20

1 seller $Q = q$

① draw diagram

② find equilibrium



{ When $P > 10$ only customer B buy
 { When $P < 10$ both customer buy

$$\begin{aligned}
 \bullet \quad Q_{\text{mkt}} &= 20 - \frac{1}{2}p & \text{when } P > 10 \\
 &= 30 - \frac{3}{2}p & \text{when } P < 10
 \end{aligned}$$

$$30 - \frac{3}{2}p = p$$

$$-\frac{3}{2}p - p = -30$$

$$-\frac{5}{2}p = -30$$

$$-5p = -60 \quad p^* = 12$$

$$Q^* = 30 - \frac{3}{2}(12) = 12$$

{ 1 buyer
 { 1 seller

$$\begin{aligned}
 \therefore p^* &= 12 \\
 Q^* &= 12
 \end{aligned}$$