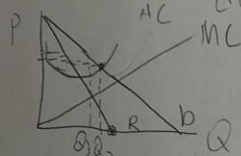


# Week 11

1. 銷量極大, 不賠錢  $\pi = 0$   $TR - TC = P(Q)Q - A(Q)$   
 $\times Q = (P - AC) \times Q = 0$   
 $(=) AC = P$  訂價

2. 總收入極大  $\frac{dTR}{dQ} = 0 \Rightarrow$  總收入為 0  
 3. 利潤極大  $\frac{d\pi}{dQ} = 0 \Rightarrow$  總利潤為 0



$$2. \begin{cases} P = a - bQ \\ MC = c + eQ \end{cases} \quad MR = MC$$

$$\pi = TR - TC = (a - bQ) \times Q - [cQ + \frac{e}{2}Q^2] \quad \frac{d\pi}{dQ} = 0 \Rightarrow MR = MC$$

$$a - 2bQ = c + eQ \quad Q^* = \frac{a - c}{2b + e}$$

$$a - c = eQ + 2bQ = (2b + e)Q$$

$$P^* = a - bQ^* = a - b \times \frac{a - c}{2b + e}$$

$$Q^* = \frac{a - c}{2b + e}$$

3. 4/11 用  $MR = MC$ ,  $120 - 2Q = 4Q$ ,  $Q = 20$

$$P = 120 - Q \quad TC = 2Q^2$$

$$\Rightarrow MR = MC \quad Q^* = 20 \quad P^* = 100$$

$$\pi = TR - TC = 100 \times 20 - 2 \times 20^2 = 1200$$

$$|Ed| = \left| -\frac{dQ}{dP} \right| = \frac{P}{Q} \frac{dQ}{dP} = \frac{P}{Q} \times \frac{1}{\frac{dP}{dQ}} = 5$$

$$\textcircled{2} L = \frac{P - MC}{P} = \frac{1}{|\epsilon_d|} \quad 4Q = 120 - Q$$

$$MC = 4Q = 4 \cdot 20 = 80 \quad Q = 24$$

$$= \frac{(100 - 80) \times (24 - 20)}{2}$$

