

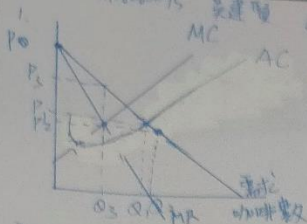
HW11 A108260075

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Qx 最大, AC 和 Pcurve 相切, (R, P)

MR=0, $\pi > 0$, Q_2 決定價格 (P) 位置

MR=MC, 有 π MAX, Q_2 決定價格 (P) 位置



(b) c 的增力對 Q 和 π 的增減是向?

$$Q = \frac{a-c}{2b+c}, c \uparrow, Q \downarrow$$

(c) 當 $c=0$, 則 a 的增力對平均價格?

$$\rightarrow c \geq 0, P = \frac{ab+ae+bc}{2b+c}, a \uparrow, P \uparrow$$

2. $P = a - bQ, a > 0$
 $MC = c + eQ, 2b + e > 0$

(a) $MR = MC$ (-b)
 \Rightarrow MR 斜率 = 2 需求曲線斜率
 = 2 價格斜率

$$MR = a - 2bQ$$

$$a - 2bQ = c + eQ$$

$$Q = \frac{a-c}{2b+e} \text{ 代入原式 } P = a - b \left(\frac{a-c}{2b+e} \right)$$

3. $P = 120 - Q$

$$TC = 2Q^2, MC = 4Q$$

(A) 求均衡價格、產量、利潤

需求彈力、獨占力

MR 斜率 = 2 倍 P 曲線斜率

$$MR = 120 - 2Q$$

$$MR = MC \Rightarrow 120 - 2Q = 4Q \Rightarrow Q^* = 20 \text{ 代入 Demand curve}$$

$$\Rightarrow P^* = 120 - 20 = 100$$

$$\Rightarrow \pi^* = P \cdot Q - TC = 100 \cdot 20 - 2 \cdot (20)^2 = 1200$$

$$E_d = \frac{100}{20} = 5$$

$$\Rightarrow MC = 4Q^* = 80$$

$$\Rightarrow \text{獨占力} = \frac{100-80}{100} = 0.2$$

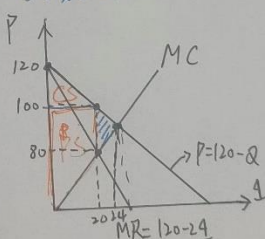
MC 訂價法 TS

= 原來的 TS

$$= 120 \times 20 / 2$$

$$= 1200$$

(B) 獨占的 DWL



$$DWL = \frac{(100-80) \times 20}{2} = 200$$

(C) MC 訂價法的均衡價格、產量、利潤、DWL?

$$P = MC, 120 - Q = 4Q \Rightarrow Q = 24 \text{ 代入價格式}$$

$$P = 96$$

$$\pi = 96 \times 24 - TC = 96 \times 24 - 2 \cdot (24)^2 = 1152$$

$$\Rightarrow P = MC, \text{無獨占損失} = 0$$

(D) AC 訂價法, 均衡價格、產量、利潤、DWL?

$$P = AC, 120 - Q = 2Q \Rightarrow Q = 40 \text{ 代入函數, } P = 80$$

$$\pi = 80 \times 40 - TC = 3200 - 2 \cdot (40)^2 = 0$$

$$AC \text{ 訂價法 } TS = CS + PS = CS + \pi = CS + 0 = (120-80) \cdot 40 / 2$$

$$DWL = 1440 - 800 = 640$$