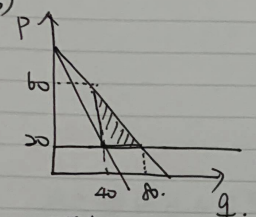
4. $P = 100 - q$, $C = 30 + 20q$

(A) $MR = 100 - 2q = 20 = MC \Rightarrow q^* = 40$, $P^* = 60$

$ML = (60 - 20) / 60 = 2/3$.

$\pi^* = (40 \times 60) - (30 + 20 \times 40) = 1570$.

(B)



無謂 $= 1/2 (40 \times 40) = 800$.

(C) 獨占力 $= (P - MC) / P = (60 - 20) / 60 = 2/3$.

(D) $MR = MC + t$ ← 從量稅

$100 - 2q = 30 + t \Rightarrow q^* = 35$ $P^* = 65$.

$\pi = (35 \times 65) - (30 + 20 \times 35) - (10 \times 35) = 1195$

(E) $(1 - 10\%) MR \Leftrightarrow 0.9 (100 - 2q) = 20$.

$Q = 38.9$ $P = 550/9$.

(F)

(G) 利潤稅對產出、價格均無影響 故 $q^* = 40$, $P^* = 60$.

稅後利潤 $= (0.8 \times$ 稅前利潤$) = 0.8 \times 1570 = 1256$.

(H) $P = MC \Leftrightarrow 100 - 2q = 20 \Leftrightarrow q^* = 80$ $P^* = 20$.

故虧損 $= (80 \times 20) - (30 + 20 \times 80) = -30$.

無謂損失 $= 0$.

5 設獨立廠商在均衡下，價格是邊際成本的4倍.

$MR = P (1 - 1/Ed)$ (恆成立)

$\Leftrightarrow MR = 4MC (1 - 1/Ed)$ (已知條件)

$\Leftrightarrow MC = 4MC (1 - 1/Ed)$ 均衡條件.

$Ed = 4/3$

6. 若需求函數為線性. LMC=K 則課徵從量稅七元. 消費者所面對的價格會因此而上漲七/2元??

設 $P = a - bQ$

則 $MR = a - 2bQ$

?

7. 設獨立廠商的市場需求為 $P = 280 - Q$，而其有A.B兩個工廠

成本函數為 $TCA = 2Q_A^2$

$TCB = 4Q_B^2$

Ans: 令 $MCA = MCB = MR$

$4Q_A = 8Q_B = 280 - 2Q_A - 2Q_B$

聯立解出 $Q_A = 40$ $Q_B = 20$ $\Rightarrow P = 220$.