

DATE: / /

例3 $D: P = 20 - Q$, $TC_A = 2Q_A$, $TC_B = 4Q_B$

$\text{Max } \pi = TR - TC$

$TR = 20Q - Q^2 = (20 - Q_A - Q_B)(Q_A + Q_B)$

$MR = MC_B$

$20 - 2(Q_A + Q_B) = 4$

$MR = MC_B$

$20 - 2(Q_A + Q_B) = 8$

$\Rightarrow Q_A^* = 4, Q_B^* = 20$

$P = 20$

例5 $P = 100 - Q$, $C = 30 + 20Q$

(A) P^*, Q^*, π^* # $\text{Max } \pi = TR - TC$ (E) 課 10% 從價稅, P^*, Q^*, π^*

$TR = PQ = 100Q - Q^2$

$MR = 100 - 2Q$

$MC = 20$

$\Rightarrow Q^* = 40, P^* = 60$

$\pi^* = 100 \times 40 - 800 = 1570$

(B) 獨占造成 DWL

$DWL = \frac{1}{2} (40 \times 40) = 800$

$Q^* = 40, P^* = 60, \pi^* = 1570$

(C) Lerner Index 獨占力

$L = \frac{P - MC}{P}$

$= \frac{60 - 20}{60} = \frac{2}{3}$

(D) 政府課 10% 從量稅, P^*, Q^*, π^*

$MR = MC + 10 \Rightarrow Q^* = 35, P^* = 65$

$\pi^* = 35 \times 65 - (30 + 20 \times 35) = 10 \times 35 = 115$

(E) 課 20% 利潤稅, P^*, Q^*, π^*

利潤稅對 MR, MC 無影響, 對 π 有影響

$\pi^* = 1570 \times 0.8 = 1256$

(F) 以完稅定價, 損失? $DWL?$

$P = MC = 20 \Rightarrow Q^* = 80, P^* = 20$

$\pi^* = -30$

$DWL = 0$