HW14.　　　　　　鄭又馨　經4甲.

3. (A) $MR_A = MC$. $100 - 2q_A = 20 \Rightarrow q_A = 40$　$P_A = 60$.
　　　$MR_B = MC$. $80 - 2q_B = 20 \Rightarrow q_B = 30$.　$P_B = 50$

　　　$T_C = 10 \times 40 + 50 \times 30 - 20(40 + 30)$
　　　　$= 2500 = PS$

　　　$CS = CS_A + CS_B = 800 + 450 = 1250$
　　　　$T_S = C_S + P_S = \underline{3750}$

(B) 把需求水平+.（統一定價）
$$\begin{cases} P = 100 - q, & q \leq 20 \\ P = 90 - 0.5q & q \geq 20 \end{cases} \Rightarrow \begin{cases} MR_1 = 100 - 2q, & q \leq 20 \\ MR_2 = 90 - q, & q \geq 20 \end{cases}$$

令 $MR_1 = MC \Rightarrow 100 - 2q = 20 \to q = 40$ (不合)

再令 $MR_2 = MC$, $90 - q = 20$　$q = 70$ (合)　$P = 55$

$\pi_{r} = 55 \times 70 - 20 \times 70 = 2450 = PS$　$CS = CS_A + CS_B = 1525$
　　　　$T_S = \underline{3775}$

(C)　$F = (80 - P) \times \dfrac{q}{2} = (80 - P)(80 - P)/2 = \dfrac{(80 - P)^2}{2}$

　　$\pi = 2F + (P - 20)(q_A + q_B) = (80 - P)^2 + (P - 20)(180 - 2P)$
　　　$= -P^2 + 60P + 2800$
　　$P = 30$　故 $F = 1250$,　$q = 120$,　$\pi = 3700$.

　　$CS = CS + PS = 1200 + 3700 = \underline{4900}$