Week 14

习题 3.

(A) $MR_A = MC : 100 - 2q_A = 20$ $q_A = 40$ $\Rightarrow P_A = 60$

$MR_B = MC : 80 - 2q_B = 20$ $q_B = 30$ $\Rightarrow P_B = 50$

(B) 先将需求水平相加 = (统一定价)

$\begin{cases} P = 100 - q & , q \leq 20 \\ P = 90 - 0.5q & , q > 20 \end{cases}$ $\Rightarrow \begin{cases} MR_1 = 100 - 2q & , q \leq 20 \\ MR_2 = 90 - q & , q > 20 \end{cases}$

$\bar{\pi}_2 = 55 \times 70 - 20 \times 70 = 2450 = PS$

$CS = CS_A + CS_B = 1012.5 + 512.5 = 1325$ $TS = 3775$

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

$\bar{\pi} = 2F + (P - 20)(q_A + q_B) = (80 - P)^2 + (P - 20)(80 - 2P)$

$\Rightarrow - P^2 + 60P + 2800$ $\Rightarrow P = 30$ $F = 1250$ $q = 120$ $\bar{\pi} = 3700$