Week 12.

4. (A) $MR = 100 - 2q = 20 = MC \to q = 40,\ p = 60$ $ML = \frac{60-20}{60} = \frac{2}{3}$

$TC = (40 \times 60) - (30 + 20 \times 40) = 1570.$

(B) $\frac{1}{2} \times 40 \times 40 = 800$ (C) $(60-20)/60 = \frac{2}{3}.$

(D) $\begin{cases} MR = MC + 10. \\ 100 - 2q = 30 \quad q = 35 \quad p = 65. \\ TC = (35 \times 65) - (30 + 20 \times 35) - 10 \times 35 = 1195 \end{cases}$

(E) $(1 - 10\%) MR = MC \quad 0.9(100 - 2q) = w \quad q = \frac{550}{9} \quad p = 350$

(F) $1570 - 1000 = 570.$

(G) $0.8 \times 1570 = 1256$

(H) $(80 \times 20) - (30 + 20 \times 80) = -30 \Rightarrow 0$ (無謂損失)

5. $MR = P[1 - \frac{1}{Ed}] = 4MC[1 - \frac{1}{Ed}] \quad Ed = \frac{4}{3}.$

6. $P = a - bq \quad MR = a - 2bq$

$MR = MC + t \leftrightarrow a - 2bq = k + t \quad q = \frac{a - (k+t)}{2b}$

$p = \frac{a+k+t}{2} \quad p_0 = \frac{a+k}{2} \quad p^* - p_0 = \Delta p = \frac{t}{2}.$

7. $MC_A = MC_B = MR$

$4q_A = 8q_B = 280 - 2q_A - 2q_B \quad q_A = 40 \quad q_B = 20. \quad P = 220.$