

Week 12

(A)  $MR = 100 - 2q = 20 \Rightarrow MC = 40 \quad P = 60 \quad MC = \frac{60-20}{60} = \frac{2}{3}$   
 $TU = (40 \times 60) - (30 + 20 \times 40) = 1520$

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

(D)  $MR = MC + CO$   
 $100 - 2q = 30 \quad q = 35 \quad P = 65$

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

(E)  $(1 - 10\%) MR = MC \quad 0.9(100 - 2q) = 20 \quad q = \frac{50}{9} \quad P = 350$

(F)  $15\% - 100\% = 5\% \quad (G) 0.8 \times 15\% = 12.5\%$

(H)  $(80 \times 20) - (30 + 20 \times 80) = -30$

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

6.  $P = a - bq \quad M = a - 2bg$

$MR = MC + t \quad \rightarrow a - 2bg = k + t \quad \frac{a - (k + t)}{2b}$

$$P = \frac{a + k + t}{2} \quad P_0 = \frac{a + k}{2} \quad P^* - P_0 = \Delta P = \frac{t}{2}$$

7.  $mCA = MCB = MR$

$$4q_A = 8q_B = 280 \quad -2q_A^A - 2q_B^B \quad q_A^A = 40 \quad P \\ q_B^B = 20$$

week 14

(A) ~~MR\_A = 100 - 2q\_A~~  $100 - 2q_A = 20 \quad q_A = 40 \quad P_A = 60 \quad CS_A = 60 \times 40 + 50 \times 30 - 20(40+30) = 2500 (\text{PS})$

$80 - 2q_B = 20 \quad q_B = 30 \quad P_B = 50 \quad CS_B = 80 \times 40 + 45 \times 30 - 20(40+30) = 1250$

$TCS = PS + CS = 3750$

(B)

$$P = 100 - q, q \leq 20 \quad MR_1 | 100 - 2q, q \leq 20$$

$$= 90 - 1.5q, q > 20 \quad MR_2 = 20 - q, q > 20$$

$$100 - 2q = 20 \quad q = 40$$

$$55 \times 70 - 20 \times 70 = 2450 = PS$$

$$80 - q = 20 \quad q = 60 \quad P = 55$$

$$CS = 1012.5 + 312.5 = 1325$$

(C)  $(80 - P)^2 / 2$

$$TCS = 3775$$

$$\pi_V = 2F + (P - 20)(q_A + q_B) = (80 - P^2)^2 + (P - 20)(180 - 2P) *$$

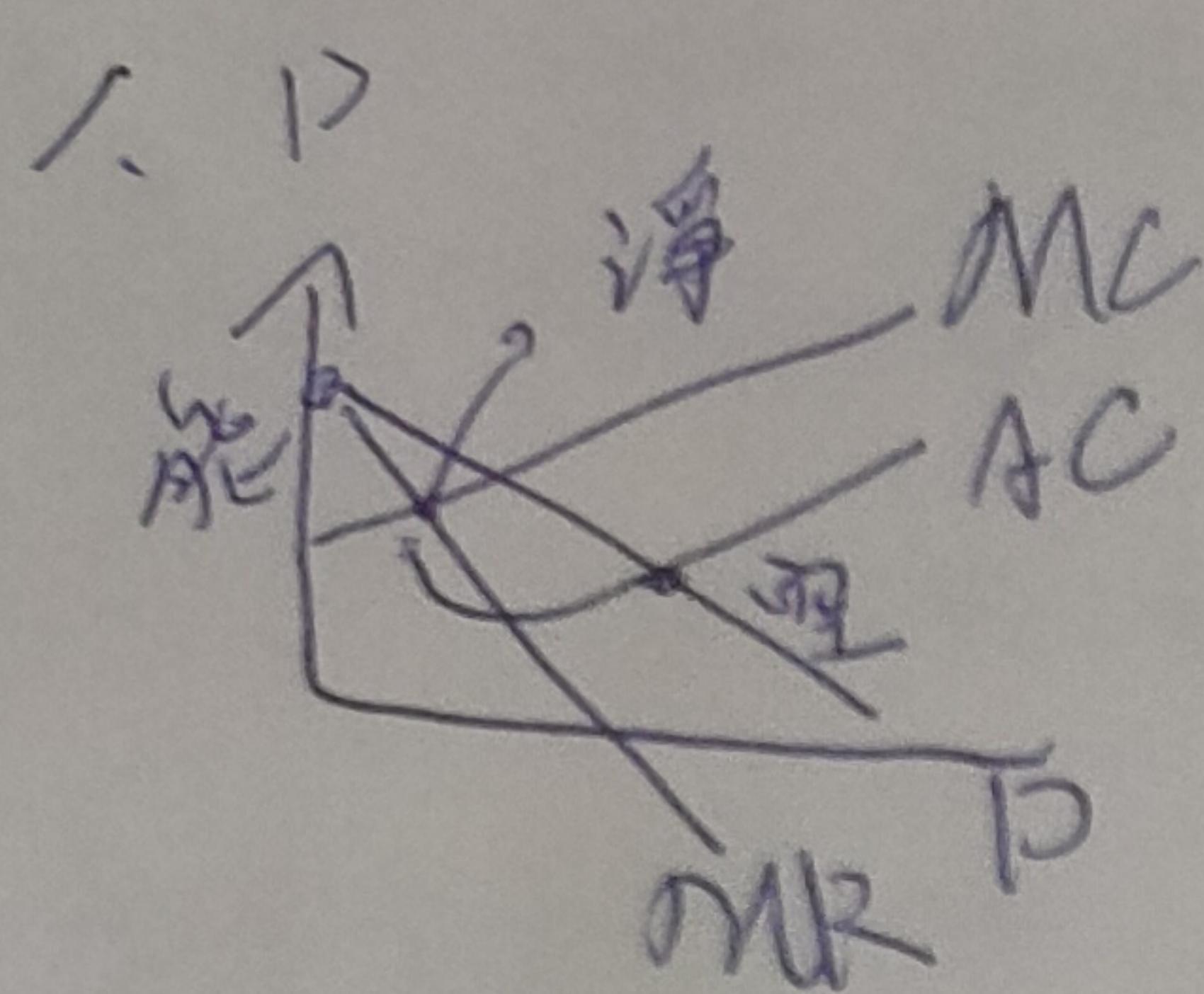
$$= -P^2 + 60P + 2800$$

$$-2P + 60 = 0 \quad P = 30 \quad F = 1250 \quad q = 120 \quad \pi_V = 3700$$

$$CS_A + CS_B - 2F = 2450 + 1250 - 2500 = 1200$$

$$TCS = 3700 + 1200 = 4900$$

## Week 11



盈 =  $P = AC$   
亏 = 在  $MR = 0$   
淨 =  $MR = MC$

(a)  $a - 2bq = C + eq$   
(b)  $q = \frac{a - c}{2b + e}$

(c)  $e \geq 0$   
 $P = ab + ac - bc$   
 $\frac{2b + e}{2b + e}$

3. (A)  $MR = MC$

$$\pi = 100 \times 20 - 2 \times 20^2 = 120$$

$$120 - 2q = 4q \quad Ed = \frac{100}{20} = 5 \quad Mc = 4q = 80$$

$$q = 20 \quad P = 100 \quad \text{獨佔} = \frac{(100 - 80)}{100} = 0.2$$

(B)  $20 \times 2 = 40$

(D)

$$P = AC$$

(C)  $P = MC \quad 120 - 4 = 4q$

$$120 - q = 2q$$

$$q = 24 \quad P = 96$$

$$q = 60$$

$$96 \times 24 - 24^2 \times 2 = 1152$$

$$\pi = 80 \times 80 - 2 \times 80^2 = 0$$

$$MC \rightarrow 0$$

$$(120 - 80) \times 20 = 800$$

$$1440 - 800 =$$