week 12

4. (A) $MR = 100 - 2q = 20 = MC \Rightarrow q = 40$, $p^* = 60$, $IM_L = \frac{60-20}{60} = \frac{2}{3}$

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

(B) 由上可知，無謂損失 $= \frac{1}{2}(40 \times 40) = 800$

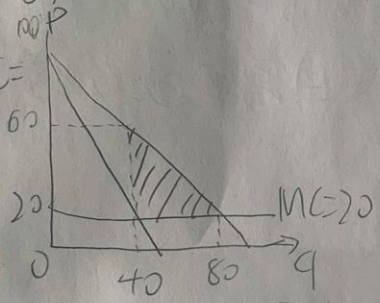
(C) 獨佔力 $= \frac{P - MC}{P} = \frac{60-20}{60} = \frac{2}{3}$

(D) $MR = MC + 10 \quad 100 - 2q = 30 \Rightarrow q = 35$, $p^* = 65$

$\pi = (35 \times 65) - (30 + 20 \times 35) - (10 \times 35) = 1175$

(E) $(1 - 10\%)MR = MC \Leftrightarrow 0.9(100 - 2q) = 20$

(F) 定額 $\pi =$



$q^* = 40 \quad p^* = 60$

利潤減少稅額部分

故 $\pi = 1570 - 1000 = 570$

(G) 利潤稅對產出、價格均無影響，故 $q^* = 40$, $p^* = 60$

稅後利潤 $= (0.8 \times$ 稅前利潤$) = (0.8 \times 1570) = 1256$

(H) $D = MC \Leftrightarrow 100 - 2q = 20 \Leftrightarrow q^* = 80$, $p^* = 20$

社會福利 $= (80 \times 20) - (30 + 20 \times 80) = 30$ 無謂損失 $= 0$

5、$MR = P(1-\frac{1}{E_d}) \Leftrightarrow MR = 4MC(1-\frac{1}{E_d}) \Leftrightarrow MC = 4MC(1-$
$\Leftrightarrow E_d = \frac{4}{3}$

6、對1，設$P=a-bQ$，則$MR=a-2bQ$，稅後利潤極大化條件為$MR=MC+t \Rightarrow a-2bQ=k+t \Rightarrow$
$Q^* = \frac{a-(k+t)}{2b}$ 代回需求函數 $P^* = a\frac{a-(k+t)}{2} = \frac{a+(k+t)}{2}$
當$t=0$表原均衡狀態 $P_0 = \frac{a+k}{2}$，$P^* - P_0 = \Delta P = \frac{t}{2}$

7、令$MC_A = MC_B = MR$，$4q_A = 8q_B = 280 - 2q_A - 2q_B$
聯立解出 $q_A = 40$，$q_B = 20$ 代回需求函數解得 $P = 220$