

(A) $p^*, q^*, \bar{\pi}^*, Ed, L$

Week 11
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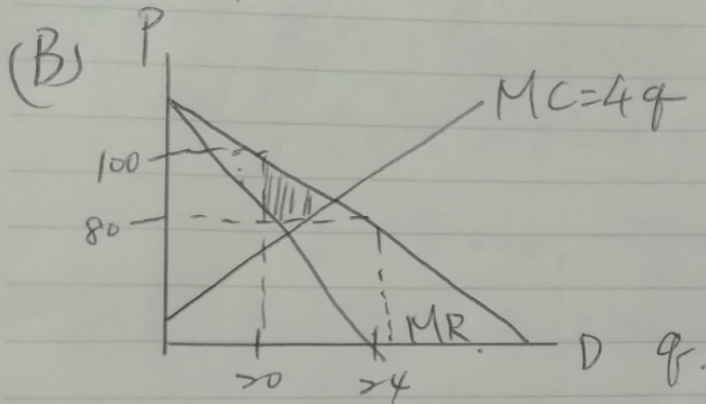
$$TR = P \times Q = 120q - q^2$$

$$\begin{cases} SMR = 120 - 2q \\ MC = 4q \end{cases} \Rightarrow \begin{cases} q^* = 20 \\ p^* = 100 \end{cases}$$

$$\bar{\pi}^* = 2400 - 400 - 800 = 1200 \text{ #}$$

$$L = \frac{p - MC}{p} = \frac{100 - 80}{100} = \frac{1}{5} \text{ #}$$

$$Ed = \frac{5}{1} = 5 \text{ #}$$



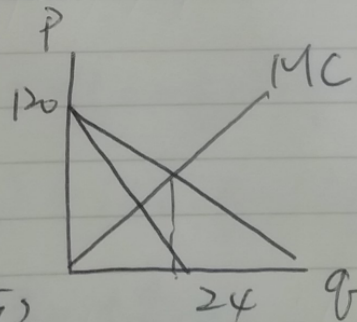
(C) $U \times MC$ 訂價, $p^*, q^*, \bar{\pi}^*, DWL$

$P = MC \Rightarrow$ 完全競爭

$$120 - q = 4q \Rightarrow q^* = 24$$

$$p^* = 296$$

$$\bar{\pi}^* = 96 \times 24 - 24 \cdot (24)^2 = 1152$$



(D) $U \times AC$ 訂價, $p^*, q^*, \bar{\pi}^*, DWL$

$p = AC$

$$120 - q = 2q \Rightarrow q^* = 40$$

$$p^* = 80$$

$$\bar{\pi}^* = 40 \times 80 = 3200$$

$$3200 - 2 \times (40)^2 = 0$$

$$DWL = (120 \times 24) \div 2 = 1440$$

