PROJECT NOTES | DATE | MEMBER | PLACE

Alon 20002 3 Week 6.

4. (A) $q = 10^{-0.5} k^{0.5} \Rightarrow L = q^2/100k$

$STC = 10L + 10k = (q^2/10k) + 10k$.

$AC = (q/10k) + (10k/q)$ $MC(q/5k)$.

(B) $\frac{\partial STC}{\partial k} = \frac{-q^2}{10k^2} + 10 = 0 \Rightarrow \tilde{k} = \frac{q}{10}$ 代入 STC 函数中.

$TC = STC(k=\tilde{k}) = \frac{q^2}{10(q/10)} + 10\frac{q}{10} = q + q = 2q$.

7. (A) $AFC = FC/q = 50/10 = 5$.

(B) $AVC = q^2 - 12q + 1 \to dAVC/dq = 2q - 12 = 0 \Rightarrow q = 6$.

(C) 根據生產與成本的對偶性，知道當 AVC 遞增時.

APL 遞減，故答案為 6.

(D) $MC = 3q^2 + 24q + 1 \to dMC/dq = 6q - 24 = 0 \Rightarrow q = 4$,

根據生產與成本的偶性，知道 MC 遞增時，MPL 遞減

故答案為 $q \geq 4$