6. (A) $q = 10\sqrt{L^*} \Rightarrow L^* = \frac{q^2}{100K}$.

$STC = 10L^* + 10K = \frac{q^2}{10K} + 10K$.

$AC = \frac{q}{10K} + \frac{10K}{q}$.

$MC = \frac{q}{5K}$.

(B) $\frac{STC}{K} = \frac{q^2}{10K^2} + 10 = 0$. $K^2 = \frac{q}{10}$.

$TC = STC(K = K^2) \Rightarrow \frac{q}{10(\frac{q}{10})^2} + 10\frac{q}{10} = 0$.

7.

(A) $AFC = \frac{FC}{q} = 5$.

(B) ~~[illegible]~~

$AVC = q^2 - 12q + 1 \rightarrow 2q - 12 = 0 \Rightarrow q = 6$.

(C) AVC 遞減，APL 遞減 $\Rightarrow q \geq 6$.

(D) $MC = 3q^2 - 24q + 1 \Rightarrow 6q - 24 = 0 \Rightarrow q = 4$.

當 MC 遞減，MPL 遞減 $\Rightarrow q \geq 4$.