完竞竞

例1 $Q^d = 2000 - 10P$, $n=40$

$STC = q_1^2 + 50q_1 + 100$

(1) 厂商短期供给曲线

$P > AVC$ 的 MC 曲线

$P = MC = 2q_1 + 50$

$AVC = q_1 + 50$

$P > AVC$

$2q_1 + 50 > q_1 + 50$ (恒成立)

$P = 2q_1 + 50$

$q_1 = \frac{P}{2} - 25$ #

(2) 市场供给曲线 # 个别水平加总.

$Q = \sum^{40} q_1$

$= 40(\frac{P}{2} - 25)$

$= 20P - 1000$ #

(3) 市场均衡价格，数量.

$S = P$

$20P - 1000 = 2000 - 10P$

$P^* = 100$, $Q^* = 1000$ #

(4) 厂商最适产量，利润

$q_1 = \frac{P}{2} - 25$

$= \frac{100}{2} - 25 = 25$ #

$TV = TR - TC$

$= 100 \cdot 25 - (25^2 + 50 \times 25 + 100)$

$= 525$ #

延伸1 $Q^d = 3500 - 10P$, $STC = q_1^2 + 50q_1 + 100$, $n=40$

(1) $MC = 2q_1 + 50 = P$

$AVC = q_1 + 50$

$q_1 = \frac{P}{2} - 25$ #.

(2) $Q = \sum^{40} q_1$

$= 20P - 1000$ #

(3) $20P - 1000 = 3500 - 10P$

$P^* = 150$, $Q^* = 2000$ #

(4) $q_1 = \frac{P}{2} - 25$

$= \frac{150}{2} - 25 = 50$ #

$TV = 150 \cdot 50 - (50^2 - 50 \cdot 50 + 100) = 2400$ #

延伸2 $Q^d = 2000 - 10P$, $n = 40$

$STC = q_1^2 + 80q_1 + 300$

(1) $MC = 2q_1 + 80 = P$

$AVC = q_1 + 80$

$q_1 = \frac{P}{2} - 40$ #

(2)

$Q = \sum^{40} q_1$

$= 40(\frac{P}{2} - 40)$

$= 20P - 1600$ #

(3) $20P - 1600 = 2000 - 10P$

$P^* = 120$, $Q^* = 800$ #

(4) $q_1 = \frac{P}{2} - 40$

$= \frac{120}{2} - 40 = 20$ #

$TV = 120(20) - (20^2 - 80 \cdot 20 + 300)$

$= 100$ #