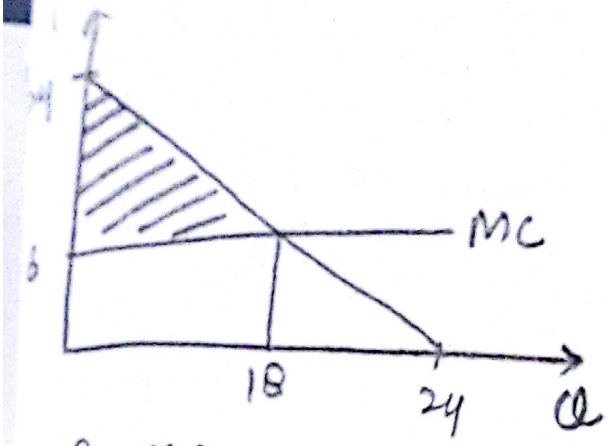


$P = MC$

$24 - q_1 = 6$

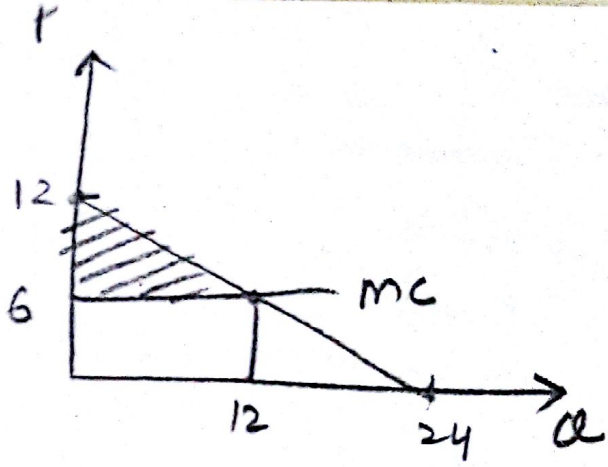
$\boxed{q_1 = 18}$

$\boxed{P_1^* = 6}$

$CS = \frac{1}{2}(18-0)(24-6)$

$= \frac{1}{2} \times 18 \times 18$

$= 162$



$P = MC$

$12 - \frac{q_2}{2} = 6$

$24 - q_2 = 12$

$\boxed{q_2^* = 12}$

$\boxed{P = MC = 6}$

$CS = \frac{1}{2}(12-0)(12-6)$

$= \frac{1}{2} \times 12 \times 6$

$= 36$

① $P = MC = 6$ – usage fee

② a = entry fee $= 36$

Profit $\pi = R - C$ or $\boxed{\pi = 2a}$

$= T(q_1) + T(q_2) - AC(q_1 + q_2)$

$= a + Pq_1 + a + Pq_2 - AC(q_1 + q_2)$

$= 72 + 6(12+18) - AC(12+18)$

$= 72 + 6 \cdot [30) - AC(30)$

$= 72 + 180 - 6(30)$

$\boxed{\pi = 72}$

now $P > MC$

consumer ①

$TR_1 = P_1 \cdot q_1$

$= (24 - q_1) q_1$

$TR_1 = 24q_1 - q_1^2$

$MR_1 = 24 - 2q_1$

$MC = 6$

$24 - 2q_1 = 6$

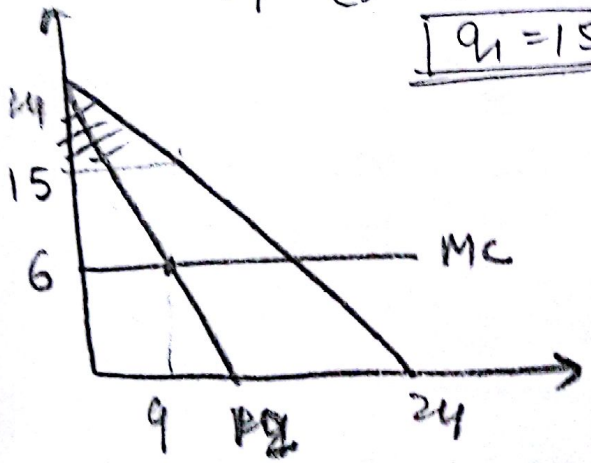
$2q_1 = 24 - 6$

$q_1^* = 9$

$p_1^* = 15$

at price(9) $P_1 = 24 - q_1$

$q_1 = 15$



$CS = \frac{1}{2} \times (9 - 0)(24 - 15)$

$= \frac{9 \times 9}{2} = \frac{81}{2} = 40.5$

consumer ②

$TR_2 = \left(12 - \frac{q_2}{2}\right) q_2$

$TR_2 = 12q_2 - \frac{q_2^2}{2}$

$MR_2 = 12 - q_2$

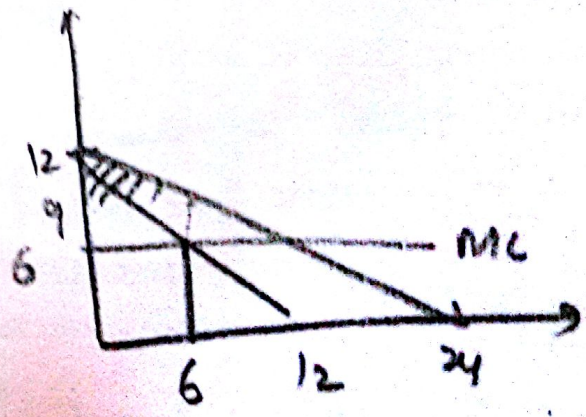
$MC = 6$

$12 - q_2 = 6$

$q_2^* = 6$

$p_1^* = 12 - 3$

$p_1^* = 9$



$CS = \frac{1}{2} \times (6 - 0) \times (12 - 9)$

$CS = \frac{1}{2} \times 6 \times 3$

$CS = 9$

$P^* = 9$

$Q = 9$

$\pi = 2q + (P - MC)(q_1 + q_2)$

$= 2 \times 9 + (9-6)(15+6)$

$= 18 + 3(21)$

$= 18 + 63$

$\pi = 81$

$= 2 \times 9 + (9-6)(15+6)$

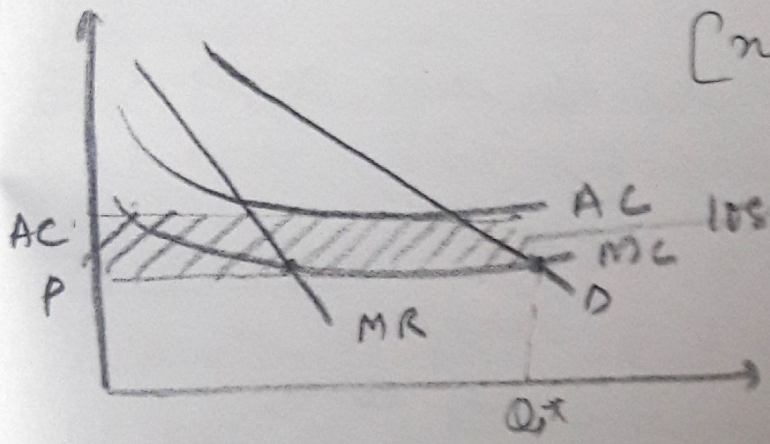
$= 18 + 3(21)$

$= 18 + 63$

$\pi = 81$

Regulation of monopoly

[natural monopoly]



area of loss = Sum of dy

firm is experiencing economies of scale, and we are trying to regulate P=MC

here the regulatory Agencies face a dilema dilemma

that is no firm can operate indefinately at loss. thus it must abundant its goal of MC pricing or must subsidised Monopoly for ever