1. $P=60-q$ $TC=30q$

(C) π $(60-q_1) \times q_1$

$+ (60-q_2) \times (q_2-q_1) = 30q_2$

(A) $MR=60-2q$. $MC=30 \Rightarrow MR=MC$ $: 60q_1-q_1^2+60q_2-60q_1-q_2^2+q_1q_2$

$60-2q=30$

$q=15$ $P=45$

$-30q_2 = -q_1^2+30q_2-q_2^2+q_1q_2$

$\pi = 15\times45 - 30\times15 = 225$

$CS = \dfrac{15\times15}{2} = 112.5$ $PS: 675-450=225$

$TS : 112.5+225 = 337.5$

(B) $P=MC \Rightarrow 60-q=30$, $q=30$ $P=30$

$\pi = \dfrac{30\times30}{2} + 30\times30 - 30\times30$

$=1350-900$ $PS = 1350-900=450$

$=450$ $CS=0$ $TS=450$