week 13

(A) $MR = 100 - 2q = 20 = MC$

$\Rightarrow q^* = 60$, $p^* = 60$ $MC = \dfrac{60-20}{60} = \dfrac{2}{3}$

$\pi^* = (40 \times 60) - (30 + 20 \times 40) = 1570$

(B) $\dfrac{1}{2} \times 40 \times 40 = 800$

(C) 獨点力 $\dfrac{P - MC}{P}$ $\dfrac{60-20}{60} = \dfrac{2}{3}$

(D) $MR = MC + 10$ $100 - 2q = 30 \Rightarrow q^* = 35$ $p^* = 60$

$\pi = (35 \times 65) = (30 + 20 \times 35) - (10 \times 35) = 1195$

(E) $(1 - 10\%)$ ω $0.9(100-2q) = 20$ $q^* = \dfrac{350}{9}$ $p^* = \dfrac{550}{9}$

$\pi^{\#} = \left(\dfrac{350}{9} \times \dfrac{550}{9} \times 0.9\right) - 30 - \left(20 \times \dfrac{350}{9}\right) = 1331$

(F)

$p = MC \Rightarrow 100 - 2q = 20$ $q^* = 80$ $p^* = 20$

虧損 $= (80 \times 20) - (30 + 20 \times 80) = -30$

無謂損失 $= 0$