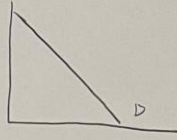


$$P = a - bq \quad \text{需求函数}$$

$$TR = P \times q = aq - bq^2$$

$$MR = a - 2bq \quad (\text{對 } TR \text{ 微分})$$

$$MR = MC$$



$$3. \quad P = 120 - q \quad TC = 2q^2$$

$$MR = 120 - 2q = MC = 4q \quad q^* = 20$$

$$\text{代回需求} \quad P^* = 100$$

$$\pi^* = R(q^*) - TC(q^*) = 20 \times 100 - 2 \cdot (20)^2$$

$$= 2000 - 2 \times 400$$

$$= 1200 > 0$$

$$CS = \frac{20 \times (120 - 100)}{2} = 200$$

$$PS = \pi^* + TFC = 1200 + 0$$