

5/5 隨堂練習.

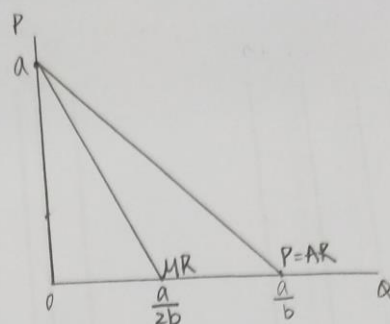
1. 假設獨占市場的需求曲線為線性.

$$P = a - bQ, TR, MR, AR.$$

$$TR = P \cdot Q = (a - bQ) \cdot Q = aQ - bQ^2$$

$$AR = \frac{TR}{Q} = \frac{aQ - bQ^2}{Q} = a - bQ$$

$$MR = \frac{dTR}{dQ} = a - 2bQ$$



2. 假設獨占市場的需求曲線為線性, 即  $P = a - bQ$ , 追求利潤極大化.  
均衡價格 & 數量.  $MC = c$

$$\text{Max } \pi = TR - TC$$

$$\frac{d\pi}{dQ} = MR - MC = 0$$

$$MR \stackrel{Q^*}{=} MC (\text{產出水準})$$

$$TR = P \cdot Q - TC(Q) \Leftrightarrow MR \stackrel{Q^*}{=} MC$$

$$\frac{2(a - bQ) \cdot Q}{dQ} = a - 2bQ.$$

$$a - 2bQ = c$$

$$Q^* = \frac{a - c}{2b}$$

$$P^* = a - b \left( \frac{a - c}{2b} \right)$$

$$= \frac{2a - a + c}{2}$$

$$= \frac{a + c}{2}$$

