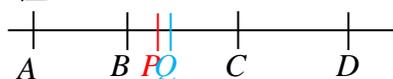


8. 先考慮兩種排列方式，如下圖

第一種



$$\text{則 } \overline{AQ} - \overline{AP} = 1$$

$$(\overline{AB} + \overline{BQ}) - \overline{AP} = 1$$

$$\overline{AB} + \frac{1}{3}\overline{BC} - \frac{1}{3}\overline{AD} = 1$$

$$\overline{AB} + \frac{1}{3}(\overline{BD} - \overline{CD}) - \frac{1}{3}(\overline{AB} + \overline{BD}) = 1$$

$$\frac{2}{3}\overline{AB} - \frac{1}{3}\overline{CD} = 1$$

$$2\overline{AB} - \overline{CD} = 3$$

$$2\overline{AB} + \overline{CD} = 3 + 2\overline{CD} > 3$$

第二種



$$\text{則 } \overline{AQ} - \overline{AP} = 1$$

$$(\overline{AB} + \overline{BQ}) - \overline{AP} = 1$$

$$\overline{AB} + \frac{1}{3}\overline{BC} - \frac{1}{3}\overline{AD} = 1$$

$$\overline{AB} + \frac{1}{3}(\overline{BD} + \overline{CD}) - \frac{1}{3}(\overline{AB} + \overline{BD}) = 1$$

$$\frac{2}{3}\overline{AB} + \frac{1}{3}\overline{CD} = 1$$

$$2\overline{AB} + \overline{CD} = 3$$