

1.2.3

$$\text{Let } m = \frac{P+q}{2}, n = \frac{P+r}{2}$$

$$\overrightarrow{mn} = n - m$$

$$\overrightarrow{mn} = \frac{P+r}{2} - \frac{P+q}{2}$$

$$\overrightarrow{mn} = \frac{P+r-P-q}{2}$$

$$\overrightarrow{mn} = \frac{r-q}{2} \quad \text{so} \quad \overrightarrow{mn} = \frac{1}{2} \overrightarrow{qr} \quad \text{Half is approved}$$

$$\overrightarrow{qr} = r - q$$

$$\overrightarrow{mn} = \frac{1}{2} \overrightarrow{qr} \quad \text{so they are parallel}$$

