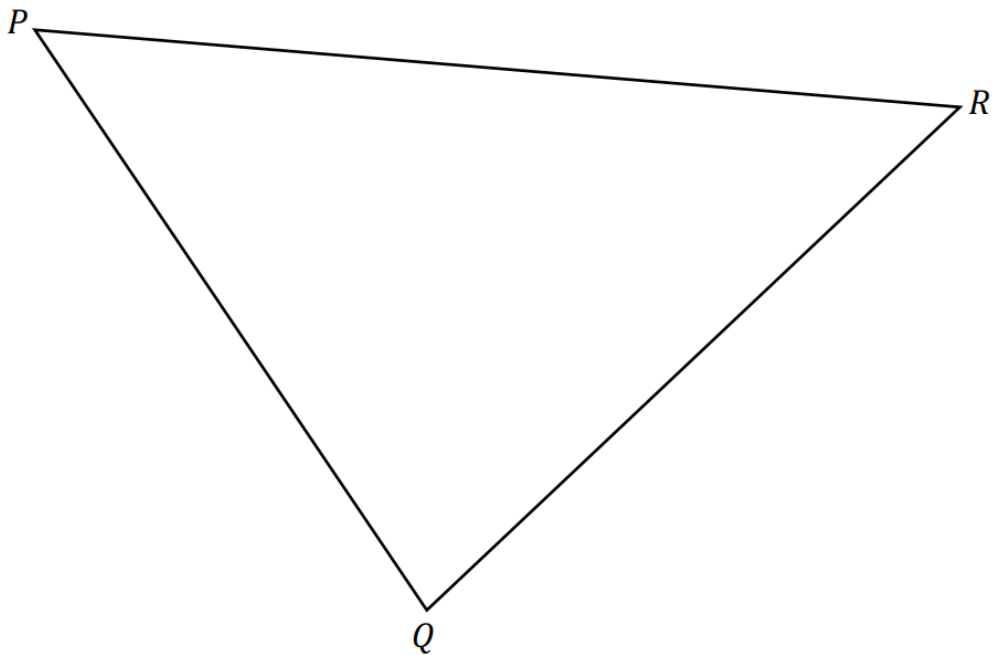


► 2024 LCHL Paper 1 – Question 4 (a)

Construct the **centroid** of the triangle PQR below.

Show all your construction lines clearly.

Where measurement is used, show all relevant measurements and calculations clearly.



► 2024 LCHL Paper 1 – Question 4 (b)

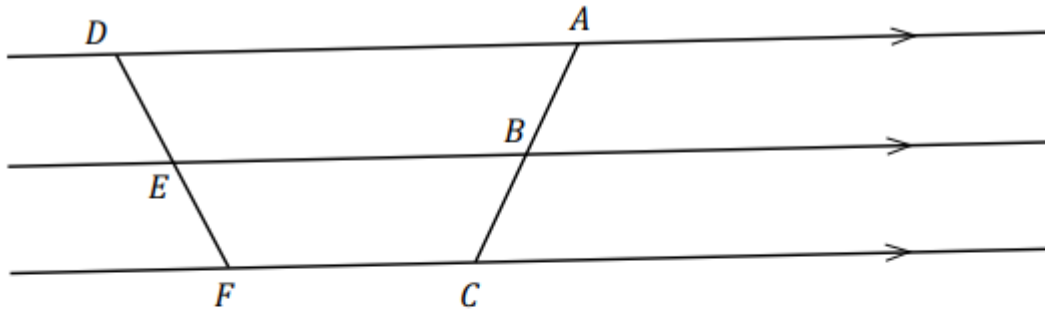
The lines AD , BE , and CF in the diagram below are parallel. $E \in DF$ and $B \in AC$.

$$|AB| = |BC|.$$

Prove that $|DE| = |EF|$.

(That is, prove that if three parallel lines cut off equal segments on some transversal line, then they will cut off equal segments on any other transversal.)

Give a reason for each statement that you make in your proof, as appropriate.



Construction:

Proof: