

relative to (AI) at F (proved)

So, (FB) is the perpendicular bisector to (IA) at F . So, F is the midpoint of $[AI]$

→ (AM) is the height relative to (IB) at M (proved)
So, (AM) is the perpendicular bisector of (IB) at M
So, M is the midpoint of $[IB]$

• In ΔIAB :

• F is the midpoint of $[AI]$ (proved)

• M is the midpoint of $[IB]$ (proved)

Thus, (FM) is parallel to (AB) and $FM = \frac{AB}{2}$
(midpoint theorem).

b) In quadrilateral $AFMB$:

(FM) is parallel to (AB) (proved)

So, $\text{mes } MB = \text{mes } FA$ (arcs intercepted by 2 parallel chords)

then, $FA = MB$ (chords intercepted by 2 equal arcs)

Thus, $AFMB$ is an isosceles trapezoid since it has 2 parallel bases and 2 equal legs (proved).

