JMO 2026/4

Evan Chen

Twitch Solves ISL

Episode 176

Problem

Triangle ABC has circumcircle ω and circumcenter O. Lines AO and BC meet at point D. Let X be the A-excenter of $\triangle ABD$ and let Y be the A-excenter of $\triangle ACD$. Prove that if X lies on ω, then Y also lies on ω.

Video

https://youtu.be/dhI18BfnHUs

External Link

https://aops.com/community/p37586265

Solution

To be added. (Angle chasing, but super annoying.)