

CMIMC 2017 G9

Evan Chen

TWITCH SOLVES ISL

Episode 48

Problem

Let $\triangle ABC$ be an acute triangle with circumcenter O , and let $Q \neq A$ denote the point on $\odot(ABC)$ for which $AQ \perp BC$. The circumcircle of $\triangle BOC$ intersects lines AC and AB for the second time at D and E respectively. Suppose that AQ , BC , and DE are concurrent. If $OD = 3$ and $OE = 7$, compute AQ .

Video

https://youtu.be/-beq_Y_Npsw

