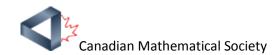
Crux Mathematicorum



http://cms.math.ca/crux/v23/n3/page170-192.pdf

2137. [1996: 124, 317; 1997: 48] Proposed by Aram A. Yagubyants, Rostov na Donu, Russia.

Three circles of (equal) radius t pass through a point T, and are each inside triangle ABC and tangent to two of its sides. Prove that:

$$(i) t = \frac{rR}{R+r}$$

(i) $t=\frac{rR}{R+r}$, (ii) T lies on the line segment joining the centres of the circumcircle and the incircle of $\triangle ABC$.