

Problem 6: A Special Point in a Triangle

Given a triangle with vertices A, B, C , find the point with the smallest sum of the squares of the distances from the vertices of the triangle. What is that smallest distance in terms of the lengths a, b, c of the sides of the triangle?

As always, show your work, fully explain and justify your answer. A solution that is mainly obtained by a calculator or computer will not be accepted.

Posting Date 3/20/2022. Submit solutions to Noah Aydin, RBH 319 (e-mail or hard-copy, but hard copy submissions must include a time stamp) by noon on Sunday March 27, 2022.