

RESEARCH GROUP IN MATHEMATICAL INEQUALITIES AND APPLICATIONS

PROBLEM CORNER

Problem 2, (2008)

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Let P be an interior point of triangle ABC , the pedal triangle and the cevian triangle of P are DEF , LMN , respectively. Prove that

$$\text{perimeter}(LMN) \geq \text{perimeter}(DEF),$$

with equality if and only if P is the orthocenter of ABC .