Problem (CGMO 2002). [1] *Find all positive integers k such that for any positive numbers a, b and c satisfying the inequality*

$$k(ab+bc+ca) > 5(a^2+b^2+c^2),$$

there must exist a triangle with a, b and c as the length of its three sides respectively.

Solution. (*Nguyen Van Huyen*) □

[1] https://artofproblemsolving.com/community/c6h247517