

Problema săptămânii 174

Dacă $a_1, a_2, \dots, a_n > 0$, arătați că

$$\left(1 + \frac{a_1^2}{a_2}\right) \left(1 + \frac{a_2^2}{a_3}\right) \cdots \left(1 + \frac{a_n^2}{a_1}\right) \geq (1 + a_1)(1 + a_2) \cdots (1 + a_n).$$

Problem of the week no. 174

If a_1, a_2, \dots, a_n are positive real numbers, prove that

$$\left(1 + \frac{a_1^2}{a_2}\right) \left(1 + \frac{a_2^2}{a_3}\right) \cdots \left(1 + \frac{a_n^2}{a_1}\right) \geq (1 + a_1)(1 + a_2) \cdots (1 + a_n).$$