

Problema săptămânii 73

Fie x_1, x_2, \dots, x_{n+1} numere reale pozitive. Arătați că

$$\frac{1}{x_1} + \frac{x_1}{x_2} + \frac{x_1 x_2}{x_3} + \frac{x_1 x_2 x_3}{x_4} + \dots + \frac{x_1 x_2 \dots x_n}{x_{n+1}} \geq 4(1 - x_1 x_2 \dots x_{n+1}).$$

Problem of the week no. 73

Let x_1, x_2, \dots, x_{n+1} be positive real numbers. Prove that

$$\frac{1}{x_1} + \frac{x_1}{x_2} + \frac{x_1 x_2}{x_3} + \frac{x_1 x_2 x_3}{x_4} + \dots + \frac{x_1 x_2 \dots x_n}{x_{n+1}} \geq 4(1 - x_1 x_2 \dots x_{n+1}).$$