Problema săptămânii 274

Fie $a, b, c > 0$. Demonstraţi că

$$\frac{a^2+b^2}{a}+\frac{b^2+c^2}{b}+\frac{c^2+a^2}{c} \geq 4\left(\frac{a^3}{a^2+b^2}+\frac{b^3}{b^2+c^2}+\frac{c^3}{c^2+a^2}\right).$$

Marius Stănean

Problem of the week no. 274

If a, b, c are positive real numbers, prove that

$$\frac{a^2+b^2}{a}+\frac{b^2+c^2}{b}+\frac{c^2+a^2}{c} \geq 4\left(\frac{a^3}{a^2+b^2}+\frac{b^3}{b^2+c^2}+\frac{c^3}{c^2+a^2}\right).$$

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