Problema săptămânii 254

Fie $a, b, c > 0$ astfel încât $\frac{1}{a^2} + \frac{1}{b^2} + \frac{1}{c^2} = \frac{27}{4}$. Demonstraţi că

$$\frac{a^3 + b^2}{a^2 + b^2} + \frac{b^3 + c^2}{b^2 + c^2} + \frac{c^3 + a^2}{c^2 + a^2} \geq \frac{5}{2}.$$

Problem of the week no. 254

Let $a, b, c > 0$ such that $\frac{1}{a^2} + \frac{1}{b^2} + \frac{1}{c^2} = \frac{27}{4}$. Prove that

$$\frac{a^3 + b^2}{a^2 + b^2} + \frac{b^3 + c^2}{b^2 + c^2} + \frac{c^3 + a^2}{c^2 + a^2} \geq \frac{5}{2}.$$