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This month's "free sample" is:

3997. *Proposé par Mihaela Berindeanu.*

Soient a, b, c des nombres positifs dont le produit est 8. Démontrer que

$$\frac{a^4 + b^4}{c^3} + \frac{a^4 + c^4}{b^3} + \frac{b^4 + c^4}{a^3} \geq 64 \left(\frac{1}{a^5} + \frac{1}{b^5} + \frac{1}{c^5} \right) + 6.$$

.....

3997. *Proposed by Mihaela Berindeanu.*

Let a, b, c be positive numbers with product 8. Prove that

$$\frac{a^4 + b^4}{c^3} + \frac{a^4 + c^4}{b^3} + \frac{b^4 + c^4}{a^3} \geq 64 \left(\frac{1}{a^5} + \frac{1}{b^5} + \frac{1}{c^5} \right) + 6.$$

