# Errata of Cubic and Quartic Cyclic Homogeneous Inequalities of Three Variables

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**p.129, line 12-14** From the equation (1.5)
I wrote that:

Let $a \geq 0$, $b \geq 0$, $c \geq 0$, then the following hold:

$$(a^4 + b^4 + c^4) + \beta(a^3b^2 + b^2c^2 + c^2a^2) \geq (\beta + 1)(a^3b + b^3c + c^3a), \tag{1.5}$$

here $\beta = 2.18452974131524781307\cdots$ is a root of
$4\beta^5 + 19\beta^4 - 32\beta^3 + 2\beta^2 - 36\beta - 229 = 0$.

But this inequality is wrong. In fact, I proved that there exists no $\beta \in \mathbb{R}$ which satisfies

$$(a^4 + b^4 + c^4) + \beta(a^2b^2 + b^2c^2 + c^2a^2) \geq (\beta + 1)(a^3b + b^3c + c^3a)$$

for all $a \geq 0$, $b \geq 0$, $c \geq 0$.