Inequality
https://www.linkedin.com/groups/8313943/8313943-6374872087684743171
Let $a, b, c > 1$, prove that

$$a^{\log_b c} + b^{\log_c a} + c^{\log_a b} \geq 3\sqrt[3]{abc}\,.$$

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Since by AM-GM Inequality $a^{\log_b c} + b^{\log_c a} + c^{\log_a b} \geq 3\sqrt[3]{a^{\log_b c} \cdot b^{\log_c a} \cdot c^{\log_a b}}$
remains to prove that $a^{\log_b c} \cdot b^{\log_c a} \cdot c^{\log_a b} \geq abc$.
Noting that $x^{\log_y z} = z^{\log_y x}$ ($\log_x(x^{\log_y z}) = \log_y z$ and $\log_x(z^{\log_y x}) = \log_y x \cdot \log_x z = \log_y z$)
we obtain $(a^{\log_b c} \cdot b^{\log_c a} \cdot c^{\log_a b})^2 = \prod a^{\log_b c} \cdot c^{\log_b a} = \prod a^{\log_b c} \cdot a^{\log_c b} = \prod a^{\log_b c + \log_c b} \geq \prod a^2$
because $\log_b c + \log_c b \geq 2\sqrt{\log_b c \cdot \log_c b} = 2$)