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Improved GA -Convexity Inequalities

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Abstract: We consider a class of algebraic inequalities for functions of n variables depending on parameters that generalise the case of GA -convex functions. The functions in this class are GA -convex only in a subdomain of definition yet the inequality for GA -convexity still holds on the whole domain if suitable conditions are satisfied by the parameters. The method is elementary and allows us to give further extensions to a large class of functions.

As an application we show the validity of an n -dimensional generalization of a conjectured inequality related to a problem given at the 42nd IMO held in Washington DC (USA) in 2001.



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