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A Functional Inequality for the Survival Function of the Gamma Distribution

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Abstract: In this note we give a completely different proof to a functional inequality established by Ismail and Laforgia for the survival function of the gamma distribution and we show that the inequality in the question is in fact the so-called new-is-better-than-used property, which arises in economic theory. Moreover, we extend this result to arbitrary reliability functions and we present a new simple proof for the Esseen-Mitrinovic inequality.



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