

PROOF OF ONE OPEN INEQUALITY OF LAUB–ILANI TYPE

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Abstract. In this paper, we prove one new algebraic trigonometric inequality of Laub–Ilani type. This inequality was posted as the Conjecture 2.4 in the paper A. Y. Özban, “New Algebraic–Trigonometric Inequalities of Laub–Ilani type”, Bull. Aust. Math. Soc., 2017, doi 10.1017/S0004972717000156.

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REFERENCES

- [1] ÖZBAN, A. Y., *New algebraic-trigonometric inequalities of laub-Ilani type*, Bulletin of the Australian Mathematical Society, Volume 96, Issue 1, pp. 87–97, (2017),
<https://doi.org/10.1017/S0004972717000156>.
- [2] CIRTOAJE, V., *On some inequalities with power-exponential functions*, J. Inequal. Pure Appl. Math. 10 (2009), article ID 21. Google Scholar.
- [3] CORONEL, A. AND HUANCAS, F., *Proof of three power-exponential inequalities*, J. Inequal. Appl. 2014 (2014), article ID 509. CrossRef, Google Scholar.
- [4] LAUB, M., *Problem E3116*, Amer. Math. Monthly 92 (1985), 666. Google Scholar.
- [5] LAUB, M. AND ILANI, I., *A subtle inequality*, Amer. Math. Monthly 97 (1990), 65–67. CrossRef, Google Scholar.
- [6] MATEJICKA, L., *Solution of one conjecture on inequalities with power-exponential functions*, J. Inequal. Pure Appl. Math. 10 (2009), article ID 72. Google Scholar.
- [7] MITRINOVIC, D. S., *Analytic inequalities*, (Springer, Berlin, 1970). CrossRef, Google Scholar.
- [8] MIYAGI, M. AND NISHIZAWA, Y., *A short proof of an open inequality with power-exponential functions*, Aust. J. Math. Anal. Appl. 11 (2014), article 6. Google Scholar.
- [9] ZEIKII, A., CIRTOAJE, V. AND BERNDT, W., Mathlinks forum,
<http://www.mathlinks.ro/Forum/viewtopic.php?t=118722>,
posted 11 Nov. 2006. Google Scholar.