

OPTIMAL BOUNDS FOR THE TANGENT AND HYPERBOLIC SINE MEANS II

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Abstract. We provide the optimal bounds for the tangent and hyperbolic sine means in terms of various weighted means of the arithmetic and harmonic means.

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REFERENCES

- [1] G. D. ANDERSON, M. K. VAMANAMURTHY AND M. K. VOURINEN, *Conformal invariants, inequalities, and quasiconformal maps*, Canadian Mathematical Society Series of Monographs and Advanced Texts, John Wiley & Sons, Inc., New Yorks, 1997.
- [2] D. S. MITRINOVIĆ AND D. D. ADAMOVIĆ, *Sur une inégalité élémentaire où interviennent des fonctions trigonométriques*, Univ. Beograd. Publ. Elektrotehn. Fak. Ser. Mat. Fiz., No. **143–155** (1965) 23–34.
- [3] M. NOWICKA AND A. WITKOWSKI, *Optimal bounds for the tangent and hyperbolic sine means*, submitted.
- [4] A. WITKOWSKI, *On Seiffert-like means*, J. Math. Inequal., **9**, 4 (2015), 1071–1092, doi:10.7153/jmi-09-83.