ERROR TERMS FOR STEFFENSEN'S,
YOUNG'S, AND CHEBYCHEV'S INEQUALITIES

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Abstract. We recast the well-known Steffensen's inequality, and a number of its relations, as an equality involving an error term. The same general idea leads to error terms for Young's and Chebychev's inequalities.

Mathematics subject classification (2000): 26D15.

REFERENCES

[1] A. HOORFAR AND F. QI *A new refinement of Young's inequality*, Mathematical Inequalities & Applications, **11** (2008), 689–692.
[2] A. MCD.MERCER *An "error term" for the Ky Fan inequality*, J. Math. Anal. Appl., **220** (1998), 774–777.
[3] D. S. MITRINOVIĆ (IN COOPERATION WITH P. M. VASIĆ), *Analytic inequalities*, Springer-Verlag, New York-Berlin, 1970.
[4] D. S. MITRINOVIĆ, J. E. PEČARIĆ, AND A. M. FINK, *Classical and new inequalities in analysis*, Kluwer Academic Publishers Group, Dordrecht, 1993.
[5] C. NICULESCU AND L.-E. PERSSON, *Convex functions and their applications*, CMS Books in Mathematics, Springer, 2006.
[6] A.M. OSTROWSKI, *On an integral inequality*, Aequationes Math., **4** (1970), 358–373.
[7] J. PEČARIĆ, I. PERIĆ AND H. M. SRIVASTAVA, *A family of the Cauchy type mean-value theorems*, J. Math. Anal. Appl., **306** (2005), 730–739.

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