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Hai, D.D.; Smith, R.C.

An elementary proof of the error estimates in Simpson's rule.

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Summary: Calculus books usually give error estimates for the Trapezoidal Rule and Simpson's Rule. The estimates, especially the error estimate for Simpson's Rule, are somewhat mysterious, and proofs are generally considered beyond the scope of the text. We give a simple proof of the standard estimate for Simpson's Rule based on integration by parts and give some other estimates not found in calculus books.

Classification: N40

Keywords: error estimates; Simpson's rule