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NUMERICAL INTEGRATION OF ANALYTIC FUNCTIONS OF COMPLEX VARIABLES USING MIXED QUADRATURE RULES

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Abstract

A mixed quadrature rule of precision five is formulated by blending Fejer's first and second 3-point rules each having precision three. A linear combination of this mixed quadrature rule with Fejer's second 5-point rule results in another mixed quadrature rule of precision seven. Both these mixed quadrature rules are successfully tested by approximating line integrals of analytic functions of complex variables.

Key Words : Fejer's rule, Analytic function, Transformed rule, Mixed rule.

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