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A new superconvergence property of nonconforming rotated  $Q_1$  element in 3D  
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*Keywords:* three dimensional second order elliptic equations; superconvergence; nonconforming rotated  $Q_1$  element; numerical integration

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*Review text:*

The authors consider linear second order elliptic equations posed on a rectangular parallelepiped in three dimensions. They deal with a nonconforming finite element method using a nonconforming rotated  $Q_1$  element. Several choices of the numerical integration which lead to optimal order in  $H^1$  and  $L^2$  as well as to superconvergence properties are provided. Numerical tests justifying theoretical results are presented.

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