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The modified chord method for solving singular problem. (Chinese. English summary)
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Summary: In Hilbert space, the singular problems are solved by modifying secant method and using the extrapolation technique. Our modified chord method is shown to yield a new sequence that improves the convergence rate from 0.618 034 to 0.381 966. This method is tested by numerical examples. This new approach can also be applied to a Banach space.

MSC:
65J15 Numerical solutions to equations with nonlinear operators

Keywords:
Hilbert space; chord method; singular problems; geometry character; convergence rate

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