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Introduction to Computational Science and Engineering

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### 3.5.6 Finger Exercise: Rationale for using implicit methods

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Finger Exercises 3 due Aug 17, 2023 05:00 IST   Completed

#### Problem: Rationale for using implicit methods

4.0/4.0 points (graded)

**M02.7**

Why are implicit methods sometimes used for solving ordinary differential equations? Check all that apply.

- ☐ They always have a higher order of accuracy than explicit methods
- ☐ They are simpler to implement than explicit methods because they do not require root finding
- ☒ They can alleviate the problem that explicit methods sometimes require prohibitively small time steps in order to give stable iterates
- ☐ They can alleviate the problem that explicit methods sometimes do not converge at all no matter how small the timestep



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 Answers are displayed within the problem




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 **Explicit methods convergence** No pre  
JavierM0401

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