

Name:

ID:.....

1. (a) first order system (2) _____
(b) Euler's method (3) _____
(c) improved Euler's method (3) _____

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2. (a) verify solution (2) _____
(b) convert to first order system (2) _____
(c) myEuler (2) _____
(d) myImprEuler (2) _____
(e) order of Euler (3) _____
(f) order of improved Euler (3) _____

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3. local truncation error

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4. Matlab code:

- ODE (3) _____
- event (1) _____
- $f(v_0)$ (2) _____
- main script (4) _____
plots ((a) and (b)) (4) _____
results (table and comments) (4) _____

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Total: (50) _____