FYS3150 Project 1

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Numerical solutions of the one-dimensional Poisson equation, by rewriting into a set of linear equations.

INTRODUCTION

THEORY, ALGORITHMS AND METHODS
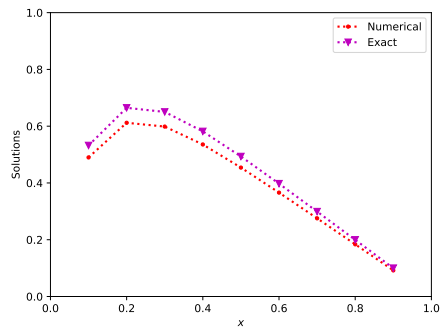
RESULTS AND DISCUSSIONS

FIG. 2. Exact and numerical solutions for $n = 1000$ mesh points, simple forwards and backwards substitution.
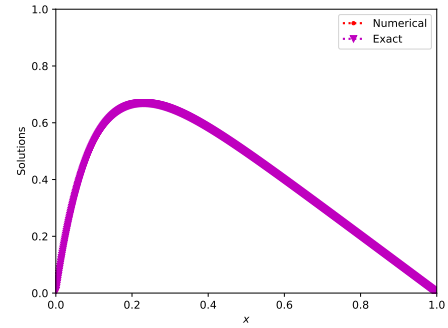

FIG. 1. Exact and numerical solutions for $n = 10$ mesh points, simple forwards and backwards substitution.
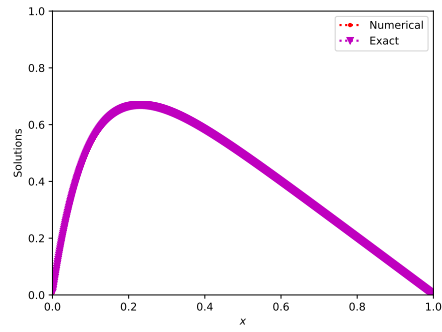
CONCLUSIONS

FIG. 3. Exact and numerical solutions for $n = 1000$ mesh points, Armadillo solver.