

In-class exercise 12

2nd-order BVP ODE:

Use finite difference method to solve the following boundary value problem:

$$\begin{cases} y'' = x \\ y(0) = 0 \\ y(1) = 1 \end{cases}$$

Divide the range of x into 10 even steps, and find x_i for $i \in [0, 1]$.

Compare with the analytical solution.