# Homework sheet 2

Tutors: Ellya Kawecki, Hamza Alawiye

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Solve in MATLAB using (a) a backward Euler scheme and (b) an RK4 scheme, the following ODE:

$$y'(t) = (1 - y(t))t + y(t), \quad y(0) = 1.$$

What is the value of the solution in each case at $t = 10$? Plot the solutions (on the same plot, with meaningful axis etc.) for 20 initial conditions equally spaced in the interval $[-1.1]$. Please submit the code you use, with good annotation.