Matlab Assignment

Deadline: 03/20/2013

1. Use the Euler, Improved Euler, and fourth order Runge-Kutta methods with $h = 0.1$ to approximate the solution to the initial value problem $y' = 2y - 6$, $y(0) = 1$, over an interval $[0, 1]$. Compare the approximate solution with an analytical solution $y = 3 - 2 \exp(2x)$ evaluated over an interval $[0, 1]$ by plotting them in a single graphical window.

2. Change the value of $h$ with 0.025 in problem 1 and again compare the solutions with the above mentioned analytical solution over an interval $[0, 1]$. 