Practice Problem

1. Consider the initial value problem

$$y'' + y' + y = t, \qquad y(1) = 1, \quad y'(1) = 2$$

   (a) Perform one step of the *Euler method* with $h = 1$ and give the resulting approximation for $y(2)$.

   (b) Perform one step of the *improved Euler method* with $h = 1$ and give the resulting approximation for $y(2)$.