

Computational and Numerical Methods

Group 16

Set 14 (29-10-2018): The Trapezoidal Method to Solve Ordinary Differential Equations

Vidhin Parmar 201601003

Parth Shah 201601086

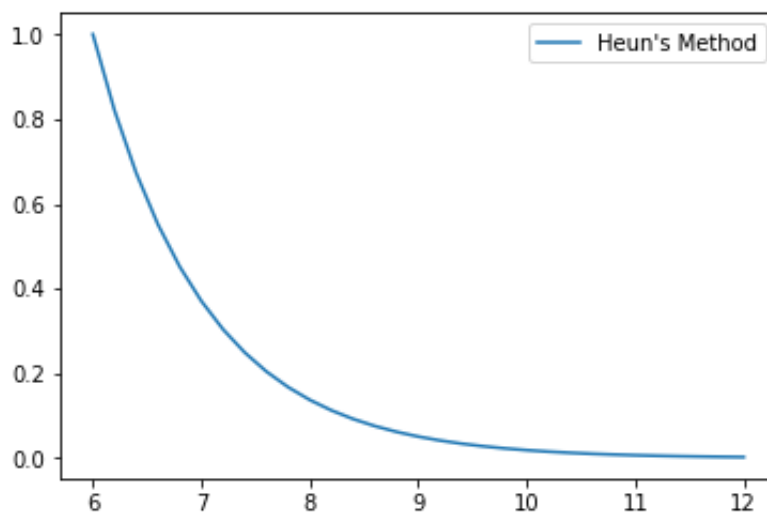
Show Code

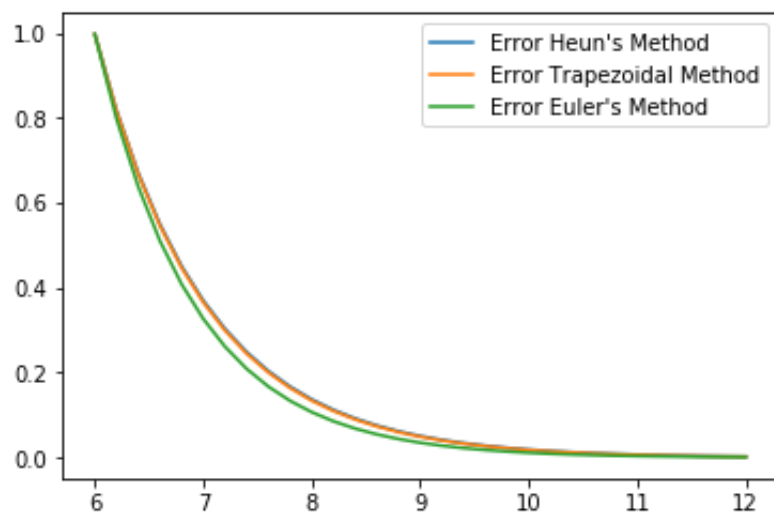
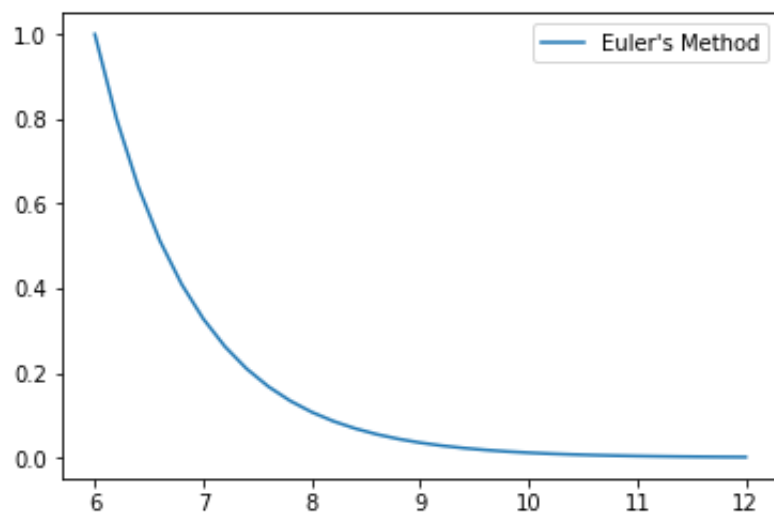
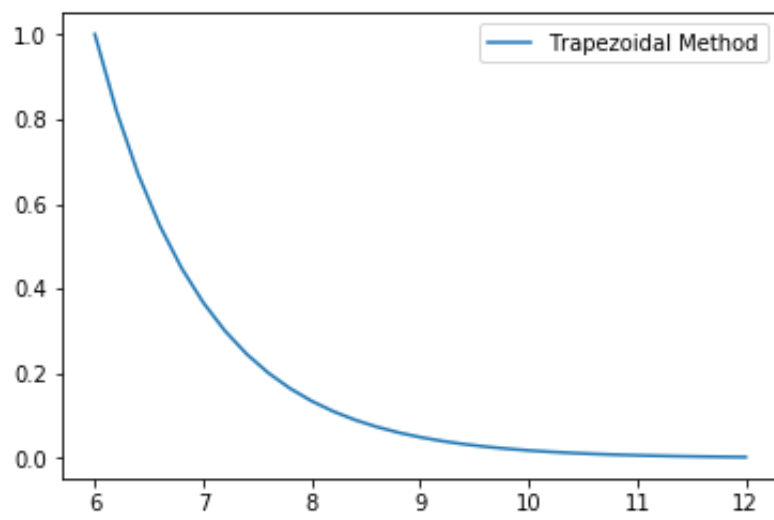
A

$$y'(x) = -y(x)$$

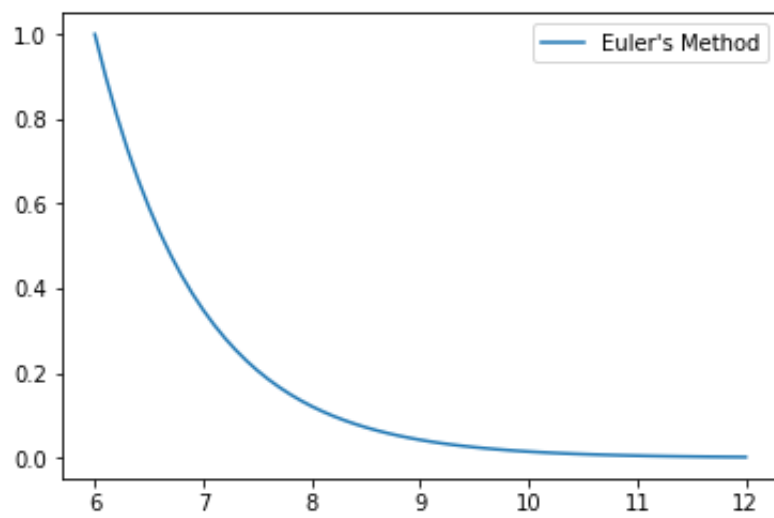
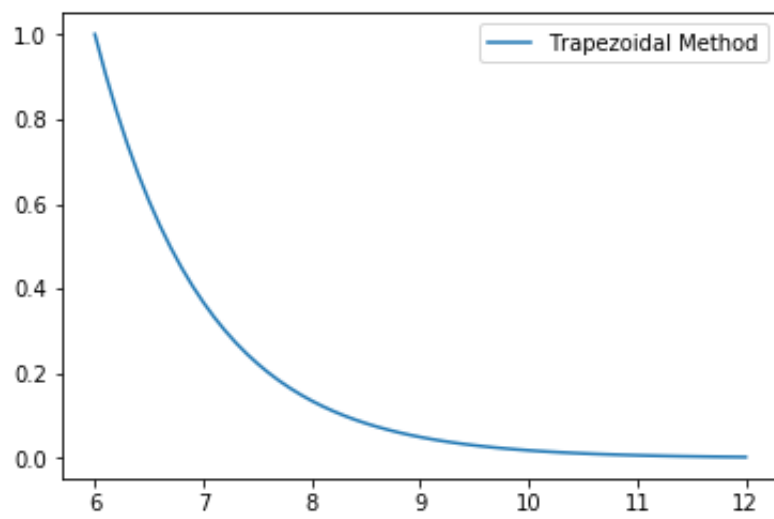
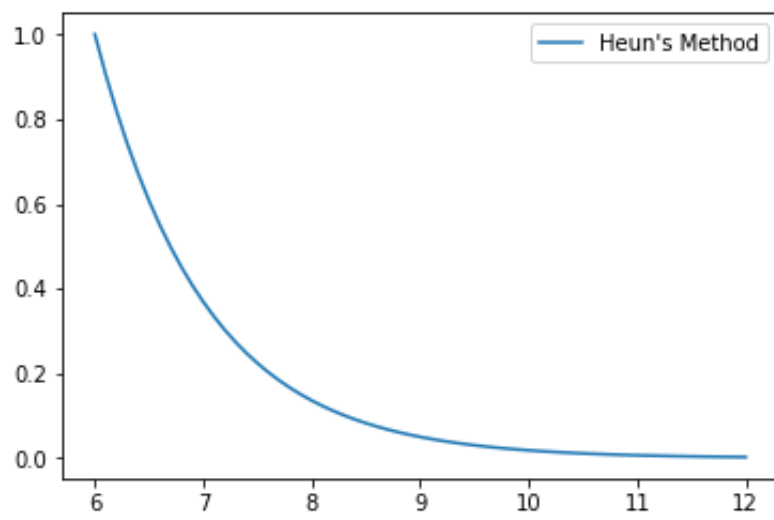
$$y(0) = 1$$

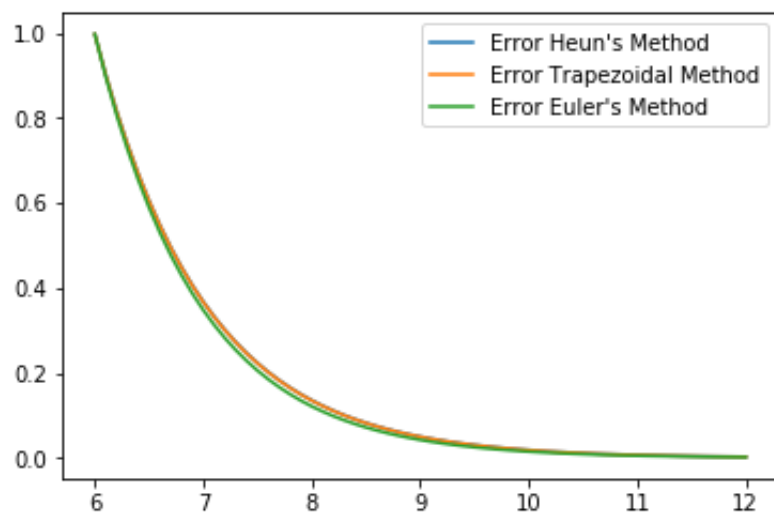
$h = 0.2$



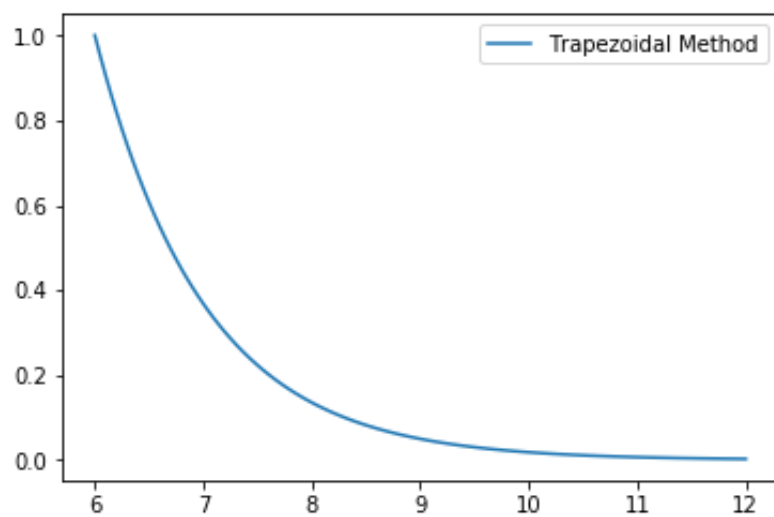
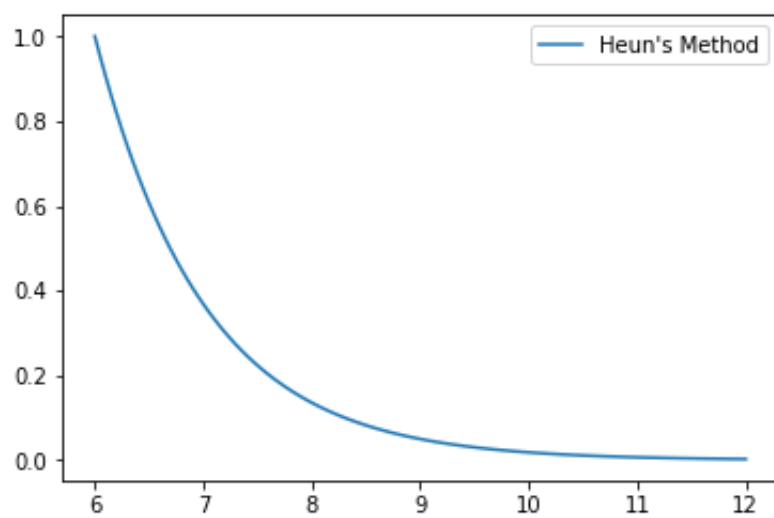


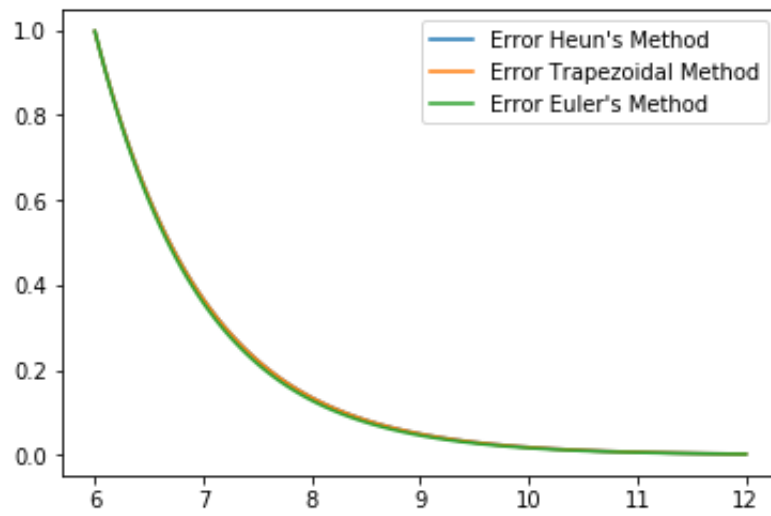
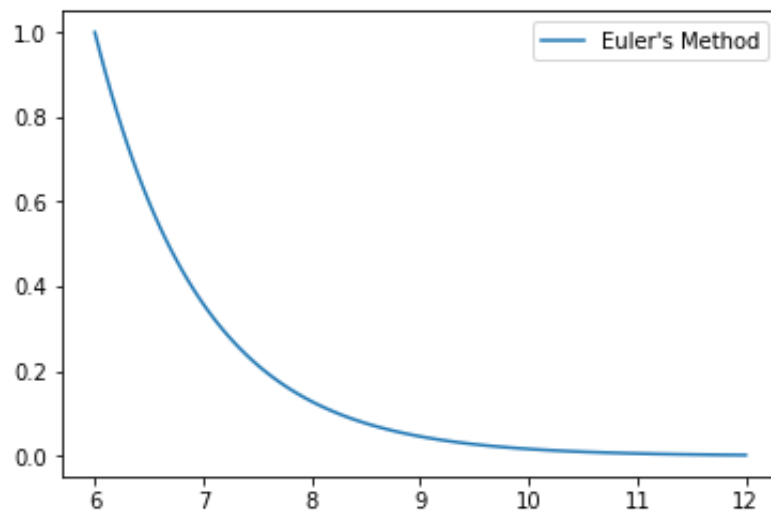
$h = 0.1$





$h = 0.05$



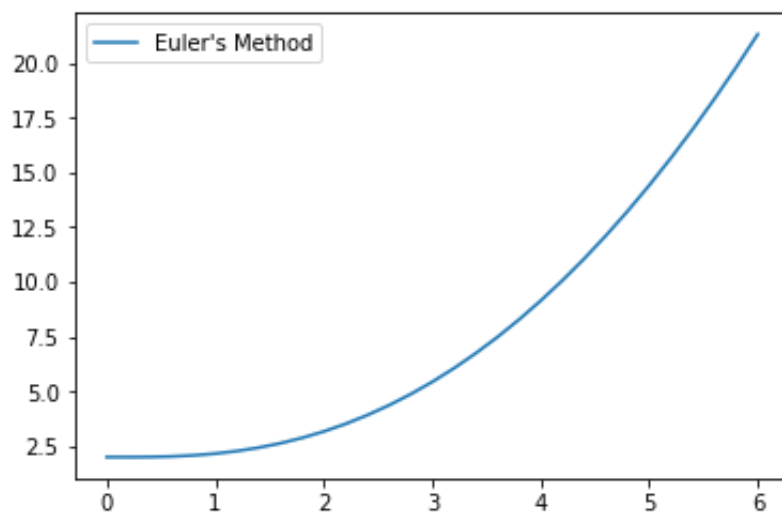
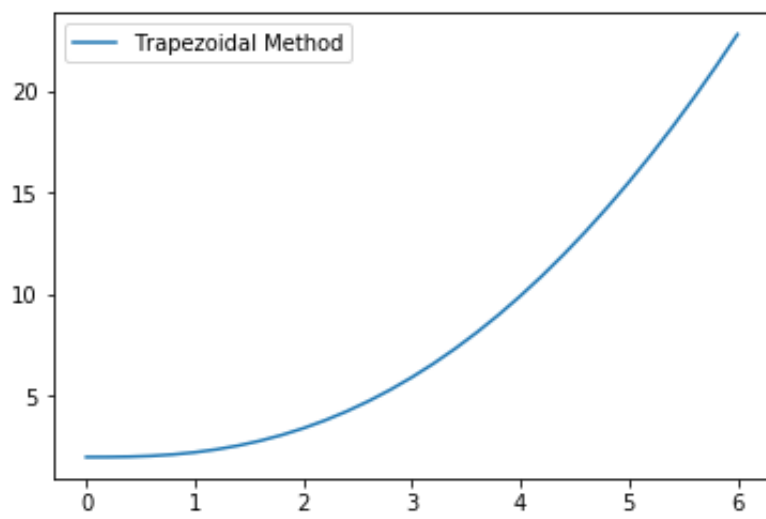
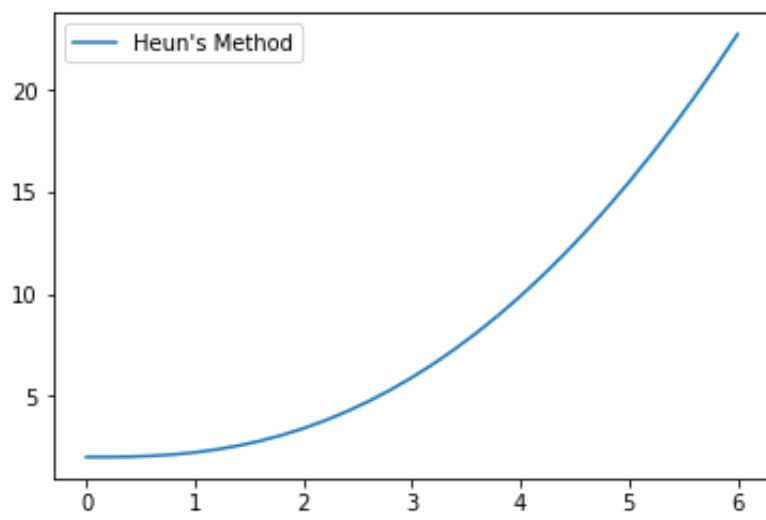


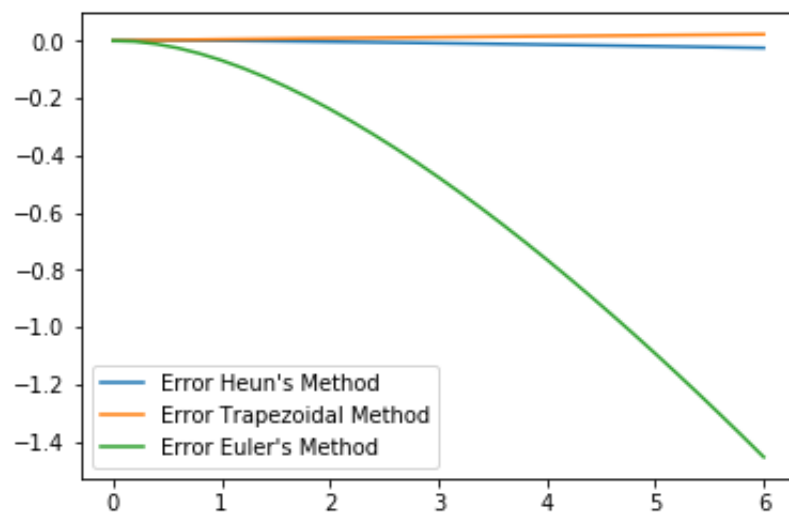
B

$$y'(x) = [y(x) + x^2 - 2]/(x + 1)$$

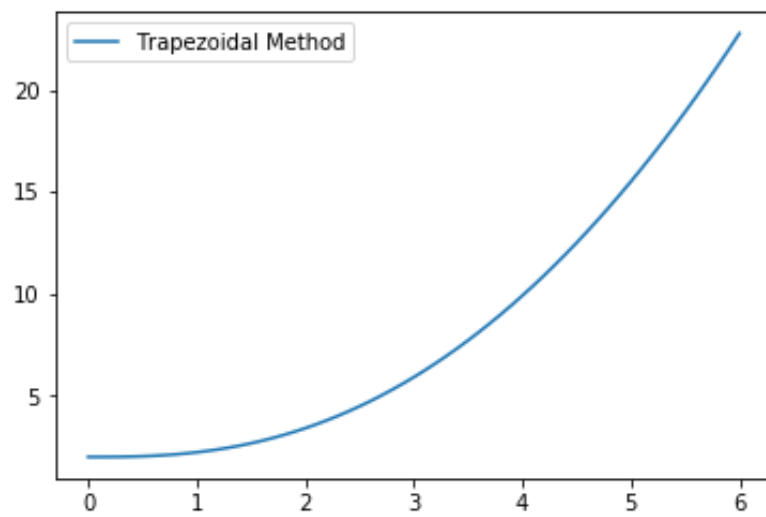
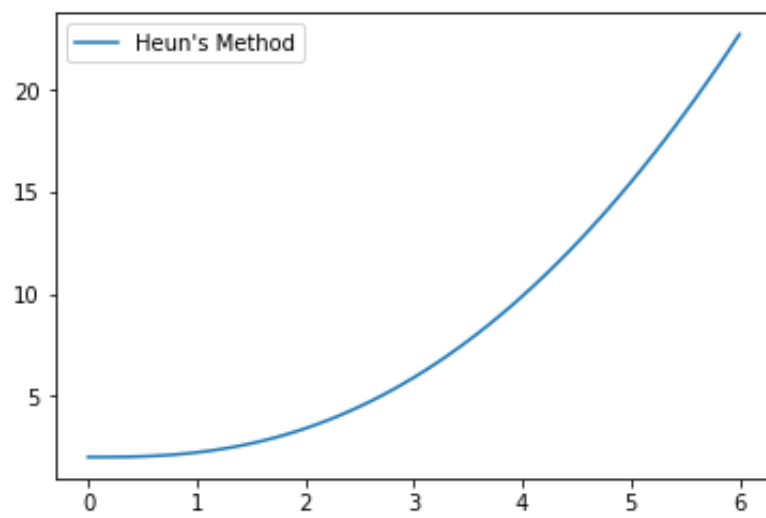
$$y(0) = 2$$

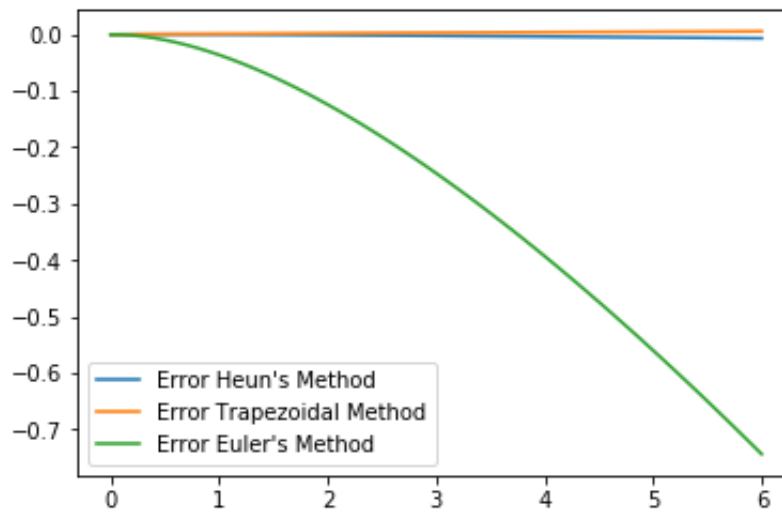
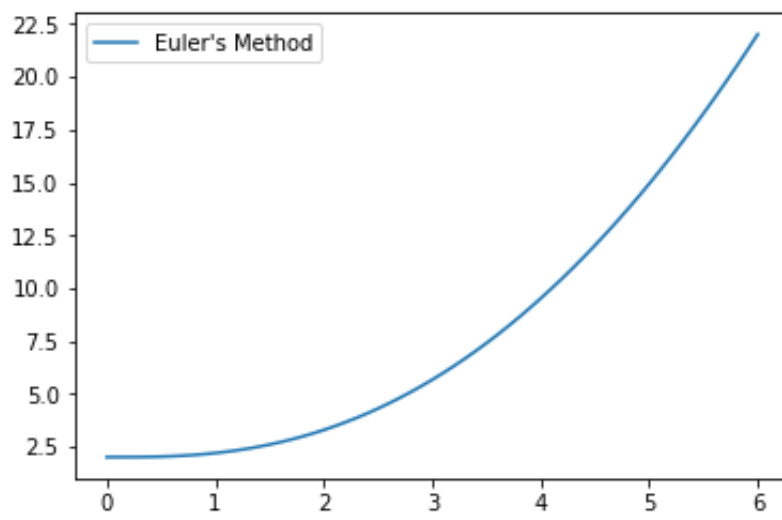
$$h = 0.2$$





$h = 0.1$





$h = 0.05$

