

NMA – homework from week 6

Consider Cauchy problem

$$y''' + \frac{1}{3-x}y' = \sqrt{x+3}, \quad y(-2) = 1, \quad y'(-2) = 5, \quad y''(-2) = 2.$$

- a) Find an interval I of the maximal solution.
- b) Choose step-size $h = 0.2$ and using the Collatz method compute approximate value of $y(-1.8)$ and $y'(-1.8)$.