

Assignment 1 for MAT4170

Spline Methods, Spring 2023

This assignment consists of the following five exercises from Chapter 1 of the compendium: Exercises 1.1, 1.2, 1.4, 1.8, and 1.10. Note: in Exercise 1.4 it is a good idea to write a separate routine called ‘eval’ which evaluates $p(x)$ at a given x . The inputs to this routine will be c_0, \dots, c_d and x . The program for plotting the curve will call ‘eval’ many times, for example 100 or 200 times, sampling x ’s uniformly in $[0, 1]$. Then you just plot the points $p(x)$ as a polygon.

To be completed by Monday 13 February. Please send your solution as a single pdf file (including plots/figures) to michaelf@math.uio.no.