

Homework #3 (NQue311, Spring 2020)

KAIST

(Due April 14)

1. Let's consider the following 13 data point.

x	y
2.2	0.4322
1.1	0.7534
0.7	0.9459
0.4	0.9756
0.25	0.8
0.1	0.3846
0	0
-0.1	-0.3846
-0.25	-0.8
-0.4	-0.9756
-0.7	-0.9459
-1.1	-0.7534
-2.2	-0.4322

Develop your own computer program to determine ‘natural’ cubic spline functions connecting the given data points. You are supposed to solve the associated *tri-diagonal* matrix equation using the *Gauss elimination* algorithm.

Determine the *interpolation polynomials* for the same 13 data points and compare with the cubic spline functions.