
Assignment/Problem Set 12

Heinrich Dinkel

ID: 1140339107

E-mail: `heinrich.dinkel@sjtu.edu.cn`

1 Exercise 6

We need to determinate whether $f(x)$ is a quadratic spline. Therefore we must verify whether $f \in C^2(R)$ or $f \in C^3(R)$.

$$f'(x) = \begin{cases} 1 & x \in (-\infty, 1] \\ 2 - x & x \in [1, 2] \\ 0 & x \in [2, \infty) \end{cases}, f''(x) = \begin{cases} 0 & x \in (-\infty, 1] \\ -1 & x \in [1, 2] \\ 0 & x \in [2, \infty) \end{cases}$$

2 Exercise 7

3 Exercise 8