MA157 - ANALYSIS 1, 2020-2021. ASSIGNMENT 9

- (1) (Adapted from Spivak's Chapter 1 Problem 4(a):) Let $a_1 < \ldots < a_n$. Find the minimum value of $f(x) := \sum_{i=1}^n (x - a_i)^2$. Justify your answer.
- (2) (Adapted from Spivak's Chapter 11 Problem 47:) Use theorems about derivatives to prove that $\frac{1}{6} < \sqrt{27} - 5 < \frac{1}{5}$.