

MINE2002 Engineering Mathematics 1. Assignment

Due date: 14.03.2019

Question 1:

Find the Taylor expansion of the given function from zero-order to four-order near $x_i = -2$.

$$f(x) = x - x^3$$

Question 2:

Find the root of the given function using Bisection Method near the boundaries of $[x_l, x_u] = [1, 2]$ and let the true error (ϵ_t) becomes lower than 0.5%. Note that the true root of this function is 1.134724138.

$$f(x) = x^6 - x - 1$$

Note: Six homework will be assigned during this semester and these homework, will contribute %10 to the mid-term and final exam.