NUMERICAL METHODS - HW1

You can write your answers in English or Turkish, however, it is encouraged to use the English.

Write all answers in A4 paper with pencil, then take photograph of sheets and send as pdf.

Or, you can scan your papers with Google Drive scan and save it as pdf.

Upload a single pdf file that containing all solutions to esuzem website.

Q1 (30 Points). Determine the Taylor expression of given function by using 3 terms and find the approximated value around 1. The step size h is equal to 1.

$$f(x) = 2x^5 - 8x^3 + 3x^2 + 4x + 6$$

Q2 (30 Points). Determine the real roots of the following equation by using Newton method for the interval of [a-b]. a=1 and b=4

$$f(x) = x^2 - 2x - 6$$

Q3 (40 Points). Determine the real roots of the following equation by using Bisection method for the interval of [a-b], a=-4 b=0

$$f(x) = x^2 - x - 6$$