

## Assignment 6. Bisection & Regula Falsi

Marks 10

Posted on 03.09.2025 @ 2:30 pm and due on 03.09.2025 @ 6:00 pm

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1. Find the root of the following function in the interval  $[1.5, 3.0]$  to an accuracy of  $10^{-6}$  using both Bisection and Regula Falsi method. **[3+3]**

$$f(x) = \log(x/2) - \sin(5x/2)$$

2. Consider the following non-linear equation

$$f(x) = -x - \cos(x)$$

Find an appropriate interval bracket in which the root possible is, starting with the interval  $[2, 4]$ . **[5]**