

Practice questions for Lecture No. 7 – 9

Question 1:

A real root of the equation $x^3 - 5x + 1 = 0$ lies in the interval (0,1). Perform two iterations of secant method to find its root.

Question 2:

If

$$f(x_0 = 1.42) = -0.0086$$

$$f(x_1 = 1.43) = 0.00034$$

Then find the next approximate value of the function using secant method.

Question 3:

Solve the following system of equations by Gaussian Elimination Method.

$$2x_2 + x_3 = -8$$

$$x_1 - 2x_2 - 3x_3 = 0$$

$$-x_1 + x_2 + 2x_3 = 3$$

Question 4:

Solve the following system of equations using Gaussian Elimination Method.

$$x_1 + 5x_2 = 7$$

$$-2x_1 - 7x_2 = -5$$

Question 5:

Find all the roots of the equation $x^3 - 8x^2 + 17x - 10 = 0$ using the Graeffe Root squaring method.