

Post test 6

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$$F(x) = 3x^3 + x^2 + x - 3 = 0$$

$$\varepsilon = 10^{-4}$$

$$x = 9$$

$$3x^3 = -x^2 - x + 3$$

$$x = \left(\frac{-x_1^2 - x_1 + 3}{3} \right)^{1/3}$$

$$\begin{aligned} 1. x^2 &= \left(\frac{-x_1^2 - x_1 + 3}{3} \right)^{1/3} \\ &= \left(\frac{(-0.8)^2 - 0.8 + 3}{3} \right)^{1/3} \end{aligned}$$

$$= 0.9819$$

$$\varepsilon_a = \left| \frac{0.9819 - 0.8}{0.9819} \right| \times 100\% = 0.1852$$

Iterasi	x_1	x_2	$\varepsilon_a\%$	ε
1	0.8	0.9819	0.1852	0.0001
2	0.9819	0.9980	0.0161	0.0001
3	0.9980	0.9997	0.0017	0.0001
4	0.9997	0.9999	0.0002	0.0001
5	0.9999	0.99992	0.000067	0.0001