Post test 9

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

$\varepsilon = 0.0001$

1. $x_1 = 1.4$

2. $F(x_1) = 1.4^3 + 1.4^2 - 3(1.4) - 3 = -2.496$

3. $F'(x_1) = 3x^2 + 2x - 3 = 3(1.4)^2 + 2(1.4) - 3 = 5.68$

4. $x_2 = x_1 - \dfrac{F(x_1)}{F'(x_1)}$

$\quad = 1.4 - \dfrac{-2.496}{5.68}$

$\quad = 1.8394$

5. $F(x_2) = 1.8394^3 + 1.8394^2 - 3(1.8394) - 3 = 1.0890$

6. $F(x_2) \geq \varepsilon a > \varepsilon$

$x_1 = x_2 = 1.8394$

Iterasi	x_1	$F(x_1)$	$F'(x_1)$	x_2	$F(x_2)$
1	1.4	-2.496	5.68	1.8394	1.0890
2	1.8394	1.089	10.8295	1.7388	0.0649
3	1.7388	0.0649	9.5988	1.7320	0.00029