$f(0,5)$ si $f(x) = 0,9x^3 - 1,4x^2 + 3x - 4$

$x = 0,4$

$x_i + i = 0,5$

$h = 0,5 - 0,4 = 0,1$

$x_i = 0,4$

$f(x) = 0,9x^3 - 1,4x^2 + 3x - 4$

$f'(x) = 2,7x^2 - 2,8x + 3$

$f''(x) = 5,4x - 2,8$

$f'''(x) = 5,4$

Orden 0

$f(0,5) \cong -2,9664$

Orden 1

$f(0,5) \cong -2,9664 + f'(0,4) \times 0,1$

$f(0,5) \cong -2,9664 + 2,312(0,1) = -2,7352$

Orden 2

$f(0,5) \cong -2,9664 + \frac{f''(0,4)}{2!} \times (0,1)^2$

$f(0,5) \cong -2,9664 - \frac{0,64}{2!} \times (0,1)^2 = -2,9696$

Orden 3

$f(0,5) \cong -2,9664 + \frac{f'''(0,4)}{2!} \times (0,1)^3$

$f(0,5) \cong -2,9664 + \frac{1,08(0,1)^3}{3!} = -2,96622$

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$f(0,55)$ $\quad f(x) = 1,4e^x - 3,2x + 3,2$

$x = 0,5$

$x_{i+1} = 0,55$

$h = 0,55 - 0,5 = 0,05$

$x_i = 0,5$

$f(x) = 1,4e^x - 3,2x + 3,2$

$f'(x) = 1,4e^x - 3,2$

$f''(x) = 1,4e^x$

$f'''(x) = 1,4e^x$

ordre 0

$f(0,55) \approx f(0,5) = -2,491790222102$

$\approx -2,49179$

ordre 1

$f(0,55) \approx -2,49179 + f'(0,5) \times 0,05$

$f(0,55) \approx -2,49179 - (0,8917902210 2) \times 0,05$

$f(0,55) \approx -2,536379732 07$

ordre 2

$f(0,55) \approx -2,536380 + \frac{f''(0,5)}{2!} \times (0,05)^2$

$f(0,55) \approx -2,536380 + \frac{2,3082098}{2!} \times (0,05)^2$

$f(0,55) \approx -2,533494627 5$

Ordre 3

$f(0,55) \approx -2,533495 + \frac{f'''(0,5) \times (0,05)^3}{3!}$

$f(0,55) \approx -2,533495 + \frac{2,308298 \ (0,05)^3}{3!} = -2,533441698$

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