Taller 11

1)

$f(x) = 1,1x^4 - 2,2x^3 + 0,7x^2 - 2x + 2$

$\bar{x} = 1,23 \quad \Delta\bar{x} = 0,05$

$\frac{22x^3 - 33x^2 + 7x - 10}{5}$

$4,4x^3 - 6,6x^2 + 1,4x - 2$

$f(x) = f(1,23) = \underline{-1.017578125}$ V. Aproximado

$\Delta f(\bar{x}) = |4,4(1,25)^3 - 6,6(1,25)^2 + 1,4(1,25) - 2| \times 0,05 =$

$\underline{-0.00984375}$ E. Aproximado

$f(x) (-[(-1.017578125) - (-0.0984375)] = [(-1,017578125) + (-0.0984375)]$

$f(x) \underline{(-[-0.919140, -1.116016])}$

2)

$f(x) = \cos(x) * \ln(2x)$

$f'(x) = \frac{\cos(x)}{x} - \operatorname{sen}(x) \ln(2x)$

$f(\bar{x}) = (\pi/3) = \underline{0.36963238}$ V. Aproximado

$\Delta f(\bar{x}) = \frac{\cos(\pi/3)}{\pi/3} - \operatorname{sen}(\pi/3) * \ln(2(\pi/3)) * 0,005 =$

$\underline{-8.137862419 \times 10^{-4}}$ E. Aproximado

$f(x) \in [(0.36963238) - (-8.137862419 \times 10^{-4})] = [(0.36963238) + (-8.137862419 \times 10^{-4})] = \underline{f(x) \in [0,3704461662, 0.3688185938]}$