Primavera

1) $\tilde{x} = 1,25 \quad \Delta\tilde{x} = 0,05$

$F(x) = 1,9x^4 - 2,2x^3 + 0,7x^2 - 2x + 2$

$F'(x) = 9,9x^3 - 6,6x^2 + 1,4x - 2$

$x \in [1,2 \ , \ 1,3]$

$\Delta F(1,25) = |9,9(1,25)^3 - 6,6(1,25)^2 + 1,4(1,25) - 2| * 0,05$

$\Delta F(1,25) = 0,0989375$

$F(x) \in [F(1,25) - \Delta F(1,25), \ F(1,25) + \Delta F(1,25)]$

$F(x) \in [1,1(1,25)^4 - 2,2(1,25)^3 + 0,7(1,25)^2 - 2(1,25) + 2) - 0,0989375 \ldots]$

$F(x) \in [-1,1760156 \ , \ -0,9191406]$ //

2) $\tilde{x} = \frac{\pi}{3} \quad \Delta\tilde{x} = 0,005$

$F(x) = \cos(x) \cdot \ln(2x)$

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

$x \in [\tilde{x} - \Delta\tilde{x} \ , \ \tilde{x} + \Delta\tilde{x}] \Rightarrow x \in [1,042197 \ , \ 1,052797]$

$\Delta F\left(\frac{\pi}{3}\right) = \left| -\operatorname{sen}\left(\frac{\pi}{3}\right) \cdot \ln\left(2\left(\frac{\pi}{3}\right)\right) + \frac{\cos(\pi/3)}{\pi/3} \right| \cdot 0,005$

$\Delta F\left(\frac{\pi}{3}\right) = 0,0008378$

$F(x) \in [F(\pi/3) - \Delta F(\pi/3) \ , \ F(\pi/3) + \Delta F(\pi/3)]$

$F(x) \in [[\cos(\pi/3) \cdot \ln(2(\pi/3))] - 0,0008378 \ , \ [\cos(\pi/3) \cdot \ln(2(\pi/3))] + 0,0008378]$

$F(x) \in [0,3687942 \ , \ 0,3709701]$ //