

$$\left. \begin{aligned} \bullet \bar{x} &= \pi/3 \\ \bullet \Delta \bar{x} &= 0,005 \end{aligned} \right\} x \in [1,042, 1,052]$$

Taller 11

• Dado un valor $\bar{x} = 1,25$

$$\left. \begin{aligned} \bar{x} &= 1,25 \\ E_a &= 5\% \\ E_a &= 0,05 \rightarrow \Delta \bar{x} \end{aligned} \right\} x \in [1,2; 1,3]$$

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

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

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

$$= 0,0984$$

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

$$= -1,96875$$

$$f(x) = [-1,96875 - 0,0984, -1,96875 + 0,0984]$$

$$f(x) = [-2,06715; -1,87035]$$

- $\bar{x} = \pi/3$
- $\Delta \bar{x} = 0,005$

$$\left. \begin{array}{l} \bullet \bar{x} = \pi/3 \\ \bullet \Delta \bar{x} = 0,005 \end{array} \right\} x \in [1,042, 1,052]$$

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

$$f'(x) = -\sin(x) \ln(2x) + \frac{\cos(x)}{x}$$

$$\Delta f(\bar{x}) = \left| -\sin(\pi/3) \ln(2(\pi/3)) + \frac{\cos(\pi/3)}{\pi/3} \right| \cdot 0,005$$

$$= \underline{\underline{0,00081}} \quad \pi/3$$

$$f(\bar{x}) = -\sin(\pi/3) \ln(2(\pi/3)) + \frac{\cos(\pi/3)}{\pi/3}$$

$$= \underline{\underline{-0,16275}} \quad \pi/3$$

$$f(x) \in [-0,16275 - 0,00081, -0,162 + 0,00081]$$

$$f(x) \in [\underline{\underline{-0,1635}}, \underline{\underline{-0,1694}}]$$