

Sesta 2ª Cálculo numérico
Aluno: Gustavo Correia do Carmo

1 a) R: ~~$F(x) = \frac{1}{(x-0.3)^2 + 0.01} + \frac{1}{(x-0.9)^2 + 0.04} - 6$~~

$$F(x) = \frac{1}{(x-0.3)^2 + 0.01} + \frac{1}{(x-0.9)^2 + 0.04} - 6$$

$$A = (-0.131, 0)$$

$$E = (1.30, 0)$$

b) R: $F(x) = e^x - \cos x - 2$

$$A = (0.95, 0) \quad B = (-0.59, -2.3)$$

$$C = (0, -2)$$

c) $F(x) = 2x^3 + \ln(x) - 5$ $A = (1.33, 0)$

d) R:

$$2- \quad F(x) = 4x - e^x \quad \varepsilon \leq 0.0100$$

$$[0, 1]$$

$$x \approx 0.3594 \quad 6 \text{ iterations}$$

$$1 \quad F(0.359375) \approx 4 \times 0.359375 - e^{0.359375} \approx 0.0055$$

$$2 \quad |b-a| < \varepsilon: \quad \frac{1-0}{2^6} = \frac{1}{64} \approx 0.0156$$

$$4 \approx \textcircled{4} 0.0433$$