

# 1. Functia lui Foias

$$G(x) := x^3 - \left(2 + \frac{2}{x}\right)^x \quad G_1(x) := x^3 - \left(2 + \frac{2}{x} + \frac{2}{x^3}\right)^x \quad G_2(x) := x^3 - \left(2 + \frac{2}{x} + \frac{2}{x^3} + \frac{2}{x^4}\right)^x$$

$$L := G(x) = 0 \text{ solve} \rightarrow 7.1831081655955057333$$

$$L := G_1(x) = 0 \text{ solve} \rightarrow 7.1218572064834215274$$

$$L := G_2(x) = 0 \text{ solve} \rightarrow 7.1130334144174734506$$

$$x := 1.5 \quad G(x) = -2.711$$

$$\text{Given} \quad G(x) > 0 \quad s := \text{Minimize}(G, x) \quad s = 2.174 \quad G(s) = -7.604 \times 10^{-4}$$

