Assignment 13: Brute-force 'auto-detection' of roots

Partition the interval $[a, b] = [2,10]$ of the given function

$$f(x) = 10 + x^3 - \sin x \sinh x$$

into N=25 sub interval of equal length,

$$\Delta_i = [x_i, x_{i+1}], i = 0,1, \dots, N-1,$$

where $x_0 = a, x_N = b$. Use the command **FindRoot**[ ] to scan all subintervals Δ_i for the roots of the function, which obey the confidition $f(x) = 0$, using an initial value in each Δ_i. Your code should then automatically print out all distinct roots lying in the interval $[a, b]$. You may have to use the command **Union**[ ] to render repeated roots into distinct ones.