HR Project — Step A (v3)

Objective: certify C_tot = max{C_bajo, C_alto, C_empalme} + ε for x ≥ 2

Inputs:
  • T0 = 3.000e+12, X0 = T0^2 = 9.000e+24
  • VK region constant = 55.241
  • VK constants: B_VK=125, b_VK=0.00445593, x1=1e+06 (suggested=True)
  • zeros file: None
  • C_R (kernel): MISSING

Zeros-based term (C0'):
  • conservative bound: C0' ≤ (Σ 1/|ρ|) / (log 2)^2
  • loaded zeros count: N/A
  • bound C0' (upper): N/A
  • note: No zeros file provided or path does not exist.

Derived constants:
  • C_bajo = 1/(4π) + C0' + C_R = N/A
  • F(X0) = 1.093159927913e+11
  • C_alto ≈ sup_x≥X0 F(x) = 2.257229062482e+31 (grid r=1.05, steps=2000)
  • C_empalme = max(C_bajo, F(X0)) = N/A
  • ε = 1.0e-12
  • C_tot = N/A

Warnings:
  • VK: Using non-certified VK suggestion. Provide vk_constants_json for certificati
  • Bajo: C_bajo cannot be certified yet (need both C0' and C_R).
  • Kernel: C_R is not provided. You must supply a certified C_R from your kernel ana

Next actions:
  1) Provide a certified C_R from kernel analysis.
  2) Provide a zeros file up to T0 to compute a *certified* C0' (this report uses a c
  3) Provide a certified vk_constants_json with (B_VK,b_VK,x1) derived from the VK re

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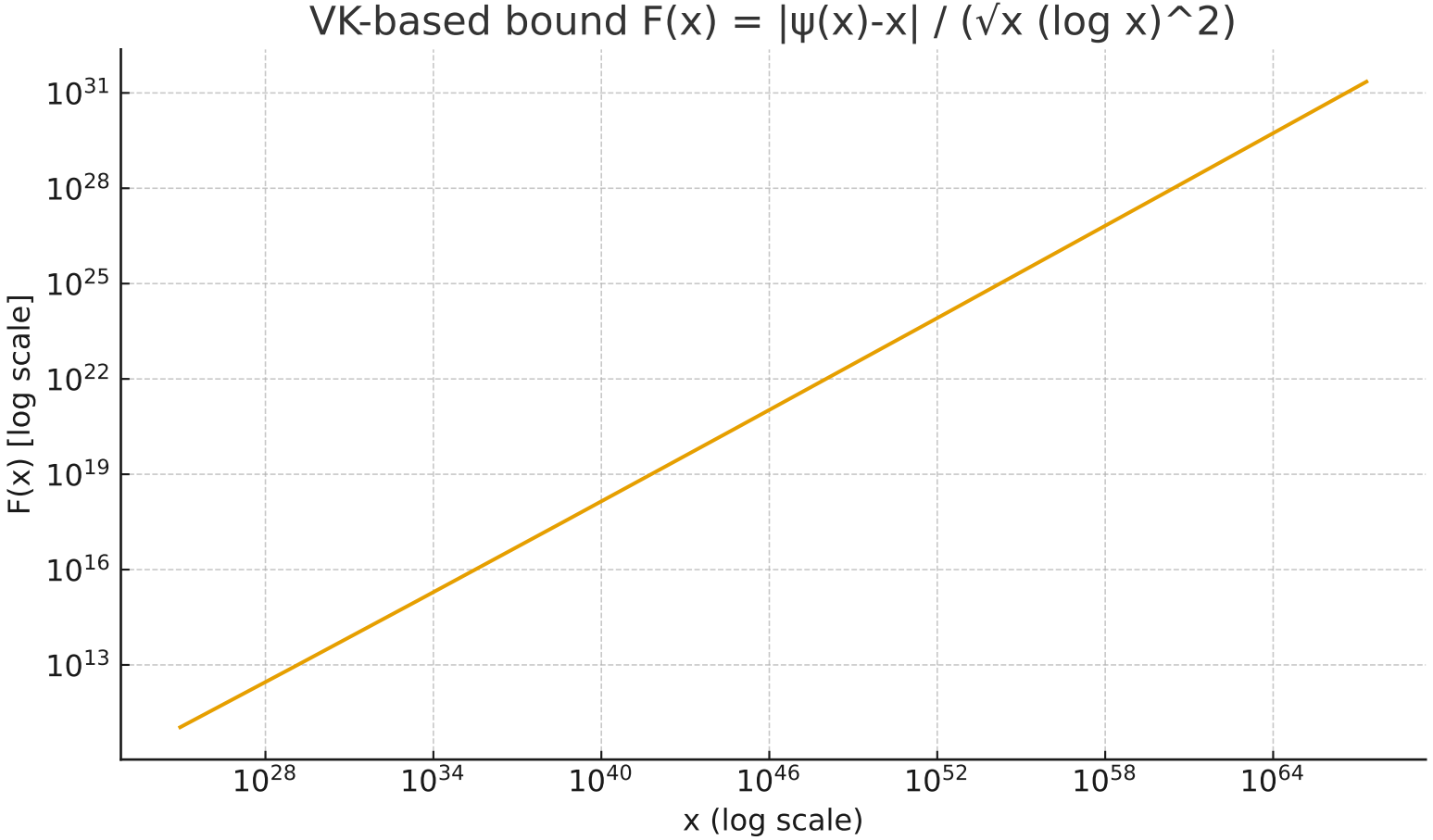
VK-based bound F(x) = |ψ(x)-x| / (√x (log x)^2)
F(x) [log scale]
10^31
10^28
10^25
10^22
10^19
10^16
10^13
10^28
10^34
10^40
10^46
10^52
10^58
10^64
x (log scale)