

Base-10: Numerical Calculation

Step	Formula	Result
1. Constants	CODATA 2018	$c, \hbar, G, H_0, \Omega_\Lambda$
2. $\rho_{\text{Planck}}$	$c^7/(\hbar G^2)$	$4.633\text{e}+113 \text{ J/m}^3$
3. $\rho_\Lambda$ (mass)	$3H_0^2\Omega_\Lambda/(8\pi G)$	$5.878\text{e}-27 \text{ kg/m}^3$
4. $\rho_\Lambda$ (energy)	$\times c^2$	$5.283\text{e}-10 \text{ J/m}^3$
5. $S = \rho_\Lambda/\rho_{\text{Pl}}$	direct ratio	$1.1403\text{e}-123$
6. $\log_{10}(S)$		-122.943
Precision	float64 error $\sim 10^{-13}$	obscures algebra

Base-24: Geometric Derivation

Factor	Origin	Value
$\varphi^{(-2\Delta k)}$	Horn volume	$1.169\text{e}-119$
$\xi^2=1.0747$	$\mathbb{R}P^4$ topology	$\times 1.0747$
$2^2=4$	N/4 spatial dims	$\times 4$ (exact)
$\div 3^2=9$	$N=3M, Z_3^2$	$\div 9$ (exact)
$\div 5=F_5$	$\mathbb{R}^5$ ambient	$\div 5$ (exact)
$\div F_{11}=89$	Planck Fibonacci	$\div 89$ (exact)
$\div M=11$	Hopf factor	$\div 11$ (exact)
$= S$	zero params	$1.1407\text{e}-123$
Error	0.013%	$\square$