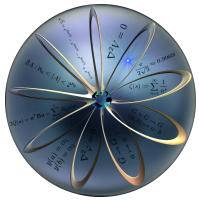

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Gronwall's theorem

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The function

$$G(n) \;:=\; \frac{\sigma(n)}{n \ln(\ln n)} \qquad (n \;=\; 2,\, 3,\, 4,\, \ldots),$$

in which $\sigma(n)$ means the sum of the positive divisors of n, satisfies the equation

$$\limsup_{n\to\infty} G(n) \;=\; e^{\gamma}$$

where γ is the Euler–Mascheroni constant.

References

[1] T. H. Gronwall: Some asymptotic expressions in the theory of numbers. – *Trans. Amer. Math. Soc.* **14** (1913) 113–122.