

$$a_{n\_} := n / \text{Log}[n]; \text{N}\left[\left(\frac{a_{n+1} + 1}{a_n}\right)^n /. n \rightarrow 10^7\right]$$

2.5547219251822  $\times 10^7$

$$a_{n\_} := n \text{Log}[n]; \text{N}\left[\left(\frac{a_{n+1} + 1}{a_n}\right)^n /. n \rightarrow 10^7\right]$$

3.0773968999490

$$a_{n\_} := n \text{Log}[\text{Log}[n]]; \text{N}\left[\left(\frac{a_{n+1} + 1}{a_n}\right)^n /. n \rightarrow 10^7\right]$$

3.983008012577

$$a_{n\_} := n \text{Log}[n] \text{Log}[\text{Log}[n]]; \text{N}\left[\left(\frac{a_{n+1} + 1}{a_n}\right)^n /. n \rightarrow 10^7\right]$$

3.024293516253

$$a_{n\_} := n \text{Log}[n] \text{Log}[\text{Log}[n]] \text{Log}[\text{Log}[\text{Log}[n]]];$$

$$\text{N}\left[\left(\frac{a_{n+1} + 1}{a_n}\right)^n /. n \rightarrow 10^7\right]$$

3.089520943653

$$e^2 // \text{N}$$

7.38906

$$\pi \text{Log}[\pi] // \text{N}$$

3.59627

$$\text{N}\left[\left(1 + \frac{1}{n} + \frac{2}{n \text{Log}[n]}\right)^n /. n \rightarrow 10^9\right]$$

2.9937