1.6 Since, we have $\lim _{n \rightarrow \infty} \frac{\ln (n)}{n^{\alpha}}=\lim _{n \rightarrow \infty} \frac{\frac{1}{n}}{\alpha n^{\alpha-1}}=0$ Hence $\ln (\mathrm{n})$ grows no faster than $\mathrm{n}^{\alpha}$ for $\alpha>0$.

