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Quiz 5 S13

$$\lim_{n \to \infty} \frac{n^{\ln n}}{7^n}$$

$$\left| \frac{n^{\ln n}}{7^n} \right|^{1/n}$$

$$\frac{n^{\frac{\ln n}{n}}}{7} = \frac{\infty}{7} = \infty$$

From the above by the root test the limit is divergent, such that $f(n)$ will grow faster than $g(n)$, such that:

$$f(n) \in \Omega(g(n))$$

$g(n)$ is a lower bound of $f(n)$