

FENNİKARİKATÜRLER

$$\begin{aligned}
 e^{ar(x)} &= \lim_{n \rightarrow \infty} \left(1 + \frac{x}{n}\right)^n = \lim_{n \rightarrow \infty} \left(\sum_{i=0}^n \binom{n}{i} \left(\frac{x}{n}\right)^i\right) - \left(1 + \frac{x}{n}\right)^n \\
 &= \sum_{i=0}^n \frac{x^i}{i!} - \left(1 + \frac{x}{n}\right)^n = \sum_{i=0}^n \frac{x^i}{i!} - \sum_{i=0}^n \binom{n}{i} \left(\frac{x}{n}\right)^i = \sum_{i=0}^n \left(\frac{1}{i!} - \binom{n}{i} \left(\frac{x}{n}\right)^i\right) x^i \\
 \left| \sum_{i=0}^n \frac{x^i}{i!} - \left(1 + \frac{x}{n}\right)^n \right| &= \left| \sum_{i=2}^n \left(\frac{1}{i!} - \binom{n}{i} \frac{1}{n^i}\right) x^i \right| < \sum_{i=2}^n \left(\frac{1}{i!} - \binom{n}{i} \frac{1}{n^i}\right) |x|^i \\
 \frac{1}{i!} - \binom{n}{i} \frac{1}{n^i} & \approx 1, \quad \binom{n-1}{i-1} \frac{1}{n^{i-1}} \approx 1, \quad \binom{n-1}{i-1} \frac{1}{n^{i-1}} \approx H_5(0)
 \end{aligned}$$

ARSIZ
güçlüyse
haklı
SUGLU
oluyor!



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