

Demonstrating $\left(1 + \frac{u}{n}\right)^n \approx e^u$ for any u

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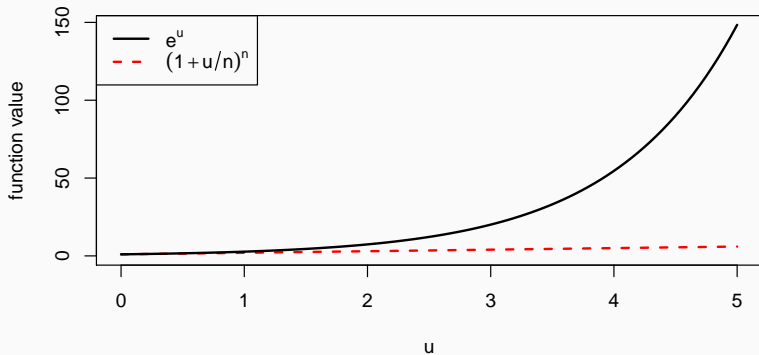
Claim

Here, we demonstrate the well-known result that

$$\left(1 + \frac{u}{n}\right)^n \xrightarrow{n \rightarrow \infty} e^u.$$

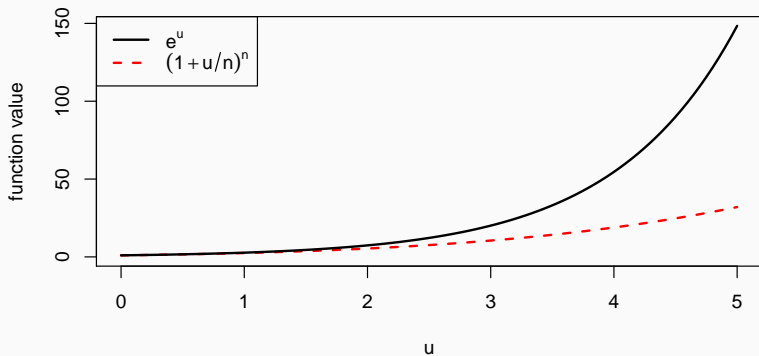
Demonstration

$n = 1$

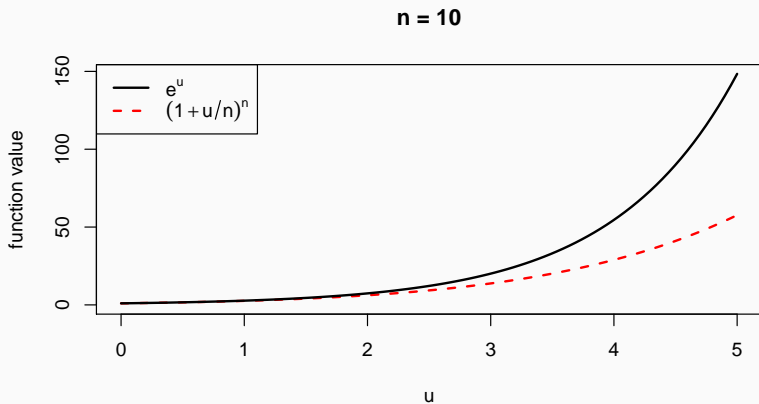


Demonstration

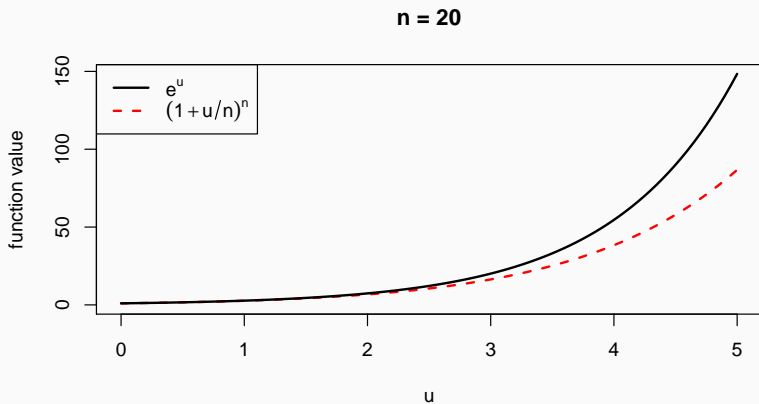
n = 5



Demonstration

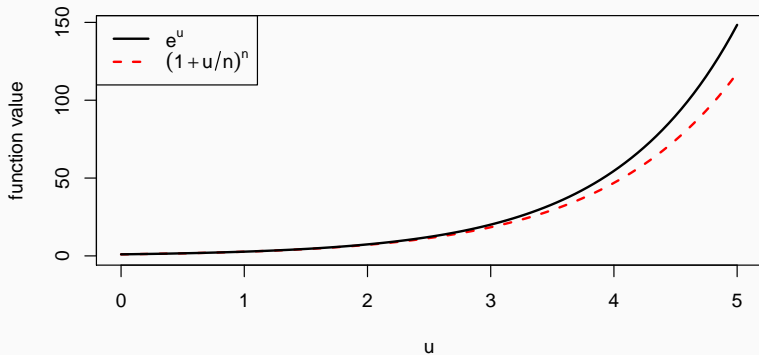


Demonstration



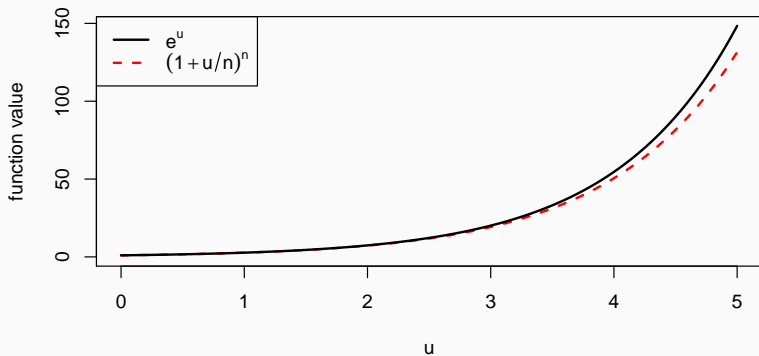
Demonstration

$n = 50$



Demonstration

n = 100



Demonstration

n = 1000

