Rješenje: Promatrat ćemo omjer(količnik)

$$\frac{1-x^{n+1}}{1-x^n}=\frac{1-x^n+x^n-x^{n+1}}{1-x^n}$$

$$\begin{aligned}
\frac{1-x^n+x^n-x^{n+1}}{1-x^n} &= \frac{1-x^n}{1-x^n}+\frac{x^n\left(1-x\right)}{1-x^n}=1+\frac{x^n\left(1-x\right)}{1-x^n}= \\
&= 1+\frac{x^n\left(1-x\right)}{\left(1-x\right)\left(1+x+x^2+\cdots+x^{n-1}\right)}= \\
&= 1+\frac{x^n}{\left(1+x+x^2+\cdots+x^{n-1}\right)}= \\
&= 1+\frac{1}{\frac{1}{x^n}+\frac{1}{x^{n-1}}+\frac{1}{x^{n-2}}+\cdots+\frac{1}{x^2}+\frac{1}{x}}<1+\frac{1}{n}
\end{aligned}$$

Ovo vrijedi jer je $0<x<1$, te je svaki od razlomaka $\frac{1}{x},\frac{1}{x^2},\ldots,\frac{1}{x^n}$ veći od 1. Sada konačno imamo

$$\begin{aligned}
\frac{1-x^{n+1}}{1-x^n} &< 1+\frac{1}{n}=\frac{n+1}{n} \\
\frac{1-x^{n+1}}{1-x^n} &< \frac{n+1}{n} \bigg/ \cdot\frac{1-x^n}{n+1} \\
\frac{1-x^{n+1}}{n+1} &< \frac{1-x^n}{n}
\end{aligned}$$