Tut 7

October 25, 2023 3:56 PM

1) Prove For all $n \in \mathbb{N}$ we have $3^n + 2 \leq 5^n$

Let $P(n)$: $3^n + 2 \leq 5^n$

Use induction.

Base Case: $P(1)$

$$3^1 + 2 = 5 \leq 5^1 \quad \checkmark$$

Assume $P(n)$ for all $n \in \mathbb{N}$.