

**Hypothesis 4.27.** [26H] We will study an order relation  $\leq$  on  $\mathbb{N}$  (not necessarily total) such that

$$\forall x \in \mathbb{N}, (0 \leq x) \quad , \quad (4.28)$$

$$\forall x, y \in \mathbb{N}, (x < Sy) \iff (x \leq y) \quad ; \quad (4.29)$$

where as usual

$$x < y \doteq (x \leq y) \wedge (x \neq y) \quad .$$