Proposition 4.39. *[28B] $\leq$ is an order relation.*

Proof. Reflexive property: $n+0 = n$. Antisymmetric property: if $n+k = m$ and $m + h = n$ then $n + k + h = n$ therefore by cancellazione [27V] $h + k = 0$, and for [27W] $h = k = 0$ so $n = m$. Transitive property: if $n + k = m$ and $m + h = p$ then $n + k + h = p$. □