

Inference at * 1
of proof for Lemma nat_ind.a:

1. $P : \mathbb{N} \rightarrow \mathbb{P}\{k\}$
2. $P(0)$
3. $\forall i:\mathbb{N}^+. P(i - 1) \Rightarrow P(i)$
4. $i : \mathbb{N}$
 $\vdash P(i)$
by ((((((D 4)
CollapseTHENM (IntInd 4)).)
CollapseTHENM (D 0)).)
CollapseTHENA (
(Auto_aux (first_nat 1:n) ((first_nat 1:n),(first_nat 3:n)) (first_tok :t) inil_term))))).

1:

4. $i : \mathbb{Z}$
5. $i < 0$
6. $((i + 1) \geq 0) \Rightarrow P(i + 1)$
7. $i \geq 0$
 $\vdash P(i)$

2:

4. $0 \geq 0$
 $\vdash P(0)$

3:

4. $i : \mathbb{Z}$
5. $0 < i$
6. $((i - 1) \geq 0) \Rightarrow P(i - 1)$
7. $i \geq 0$
 $\vdash P(i)$

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