

Inference at * 1 1 1
of proof for Lemma nat_ind_tp:

1. $P : \mathbb{N} \rightarrow \mathbb{P}\{k\}$
2. $P(0)$
3. $\forall i:\mathbb{N}^+. P(i - 1) \Rightarrow P(i)$
4. $i : \mathbb{Z}$
5. $i \geq 0$
 $\vdash P(i)$
by ($\backslash$ p.IntInd (get_int_arg 'hn' p) p)

1:downcase..... NILNIL

5. $i < 0$
6. $((i+1) \geq 0) \Rightarrow P(i+1)$
 $\vdash (i \geq 0) \Rightarrow P(i)$

2:basecase..... NILNIL

3. $\forall i:\mathbb{N}^+. P(i - 1) \Rightarrow P(i)$
 $\vdash (0 \geq 0) \Rightarrow P(0)$

3:upcase..... NILNIL

5. $0 < i$
6. $((i - 1) \geq 0) \Rightarrow P(i - 1)$
 $\vdash (i \geq 0) \Rightarrow P(i)$

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