Inference at $*$ 1 1 1 3 1 1
of proof for Lemma nat_ind_tp:

. . . . .antecedent. . . . . NILNIL

1. $P : \mathbb{N} \to \mathbb{P}\{\mathrm{k}\}$
2. $P(0)$
3. $\forall i{:}\mathbb{N}^+.\ P(i - 1) \Rightarrow P(i)$
4. $i : \mathbb{Z}$
5. $0 < i$

$\vdash (i - 1) \geq 0$
by Arith

1: . . . . .wf. . . . . NILNIL

$\vdash (i - 1) \in \mathbb{Z}$

2: . . . . .wf. . . . . NILNIL

$\vdash 0 \in \mathbb{Z}$

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http://www.nuprl.org/FDLcontent/p0_942988_/p121_94355_{nat_ind_tp}1_1_1_3_1_1.html