Inference at $*$ 1
of proof for Lemma nat_ind:

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

$\vdash P(j)$

by InteriorProof NatInd 4

1: .....basecase..... NILNIL

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

$\vdash P(0)$

2: .....upcase..... NILNIL

4. $j : \mathbb{Z}$
5. $0 < j$
6. $P(j - 1)$

$\vdash P(j)$

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http://www.nuprl.org/FDLcontent/p0_942988_/p121_93428_{nat_ind}1.html