

Inference at \* 1 0 1 3 1 1  
of proof for Lemma nat\_ind:

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

1.  $P : \mathbb{N} \rightarrow \mathbb{P}\{k\}$
  2.  $P(0)$
  3.  $\forall i:\mathbb{N}^+. P(i - 1) \Rightarrow P(i)$
  4.  $j : \mathbb{Z}$
  5.  $0 < j$
- $\vdash (j - 1) \geq 0$   
by Arith

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

$\vdash (j - 1) \in \mathbb{Z}$   
2: .....wf..... NILNIL

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