Inference at $*$ 1 0 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. $j : \mathbb{Z}$
5. $j \geq 0$

$\vdash P(j)$
 by (\p.IntInd (get_int_arg ‘hn‘ p) p)

 1: . . . . .downcase. . . . . NILNIL

  5. $j < 0$
  6. $((j{+}1) \geq 0\ ) \Rightarrow P(j{+}1)$
  $\vdash (j \geq 0\ ) \Rightarrow P(j)$
 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. $0 < j$
  6. $((j - 1) \geq 0\ ) \Rightarrow P(j - 1)$
  $\vdash (j \geq 0\ ) \Rightarrow P(j)$
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http://www.nuprl.org/FDLcontent/p0_942988_/p121_93428_{nat_ind}1_0_1.html