

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

```

1.  $P : \mathbb{N} \rightarrow \mathbb{P}\{k\}$ 
2.  $\forall i:\mathbb{N}. (\forall j:\mathbb{N}. (j < i) \Rightarrow P(j)) \Rightarrow P(i)$ 
3.  $i : \mathbb{N}$ 
 $\vdash P(i)$ 
  by (%S%
\p. let i = var_of_hyp (get_int_arg 'hn' p) p in

```

```

    let z = get_distinct_var 'zz' p in
  Assert
  (mk_all_term z  $\mathbb{N}$ 
    (
mk_all_term i  $\mathbb{N}$ 
      (mk_implies_term
        (mk_less_than_term (mvt i) (
mvt z))
        (concl p))))
    p)

```

1:assertion..... NILNIL

```

 $\vdash \forall zz,i:\mathbb{N}. (i < zz) \Rightarrow P(i)$ 
2:

```

```

4.  $\forall zz,i:\mathbb{N}. (i < zz) \Rightarrow P(i)$ 
 $\vdash P(i)$ 
.

```