Inference at * 1 1 2
 of proof for Lemma comp_nat_ind_a:

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

$\vdash P(s)$

by ((% Establish desired induction hyp %
Assert $\forall t{:}\mathbb{N}.\ (t < s) \Rightarrow P(t)$
CollapseTHEN (
IfLabL
[‘main‘,OnHyps [7;5;4;3] Thin % cleanup %
;‘assertion‘,((((RepD)

CollapseTHENM (InstHyp [t] 5))·)
CollapseTHEN ((Auto_aux (first_nat 1:n) ((first_nat
2:n),(first_nat 3:n)) (first_tok :t) inil_term)))·]))·

1:

3. $s : \mathbb{N}$
4. $\forall t{:}\mathbb{N}.\ (t < s) \Rightarrow P(t)$

$\vdash P(s)$

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