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

. . . . .assertion. . . . . NILNIL

1. $i_1 : \mathbb{Z}$
2. $i_2 : \mathbb{Z}$
3. $j_1 : \mathbb{Z}$
4. $j_2 : \mathbb{Z}$
5. $i_1 < j_1$
6. $i_2 \leq j_2$

$\vdash (i_1+1+i_2) \leq (j_1+j_2)$
  by ((BackThruLemma ‘add_functionality_wrt_le‘)
  CollapseTHEN ((Auto_aux (first_nat 1:n
) ((first_nat 2:n),(first_nat 3:n)) (first_tok :t) inil_term)))·

    .