Inference at $*$ 1 2 2 2 2
of proof for Lemma fincr_formation:

1. $i : \mathbb{N}$
2. $f : \{f \mid i{:}\{i_1{:}\mathbb{N} \mid i_1\ (\lambda i,j.\ i < j)\ i\} \rightarrow$ if $(i =_0 0)$ then $\mathbb{Z}$ else $\{f(i\text{ - }1)\ldots\}$ fi $\}$
3. $\forall j{:}\{k{:}\mathbb{N} \mid k < i\}\ .\ f(j) \in \mathbb{Z}$
4. $i \neq 0$

$\vdash (f(i\text{ - }1)) \leq (f(i\text{ - }1)+1)$
by (Auto_aux (first_nat 1:n) ((first_nat 2:n),(first_nat 3:n)) (first_tok :t) inil_term)

1: .....subterm..... T:t1:n

$\vdash f(i\text{ - }1) \in \mathbb{Z}$

2: .....wf..... NILNIL

$\vdash f(i\text{ - }1) \in \mathbb{Z}$

.