Inference at $*$ 1 4 1 1 1 1 1
 of proof for Lemma fincr_wf:

1. $i : \mathbb{N}$
2. $f : \{f \mid i{:}\{z{:}\mathbb{N} \mid z < i\} \rightarrow \text{if } (i =_0 0) \text{ then } \mathbb{Z} \text{ else } \{f(i \text{ - } 1)\ldots\} \text{ fi } \}$
3. $j : \mathbb{N}$
4. $\forall j_1{:}\mathbb{N}.\ (j_1 < j) \Rightarrow (j_1 < i) \Rightarrow (f(j_1) \in \mathbb{Z})$
5. $j < i$
6. $y : \text{if } (j =_0 0) \text{ then } \mathbb{Z} \text{ else } \{f(j \text{ - } 1)\ldots\} \text{ fi}$
7. $y = f(j)$

$\vdash f(j) \in \mathbb{Z}$
  by SplitITE (-1)
THEN Try ((Auto_aux (first_nat 1:n) ((first_nat 1:n),(first_nat 3:n
    )) (first_tok :t) inil_term) THEN Fail)

    1: .....falsecase..... NILNIL

        7. $y = f(j)$
        8. $j \neq 0$

        $\vdash f(j) \in \mathbb{Z}$
    .

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http://www.nuprl.org/FDLcontent/p0_942988_/p121_83564_{fincr_wf}1_4_1_1_1_1_1.html