

Inference at * 2 1 4 1 1
of proof for Lemma before_last:

....rewrite subgoal.... NILNIL

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1. T : Type
2. T List
3. u : T
4. v : T List
5.  $\forall x:T. (x \in v) \Rightarrow (\neg(x = \text{last}(v))) \Rightarrow x \text{ before } \text{last}(v) \in v$ 
6. x : T
7. (x  $\in$  v)
8.  $\neg(x = \text{last}([u / v]))$ 
 $\vdash \neg(\uparrow \text{null}(v))$ 
  by (((((((D 0)
CollapseTHEN (RW assert_pushdownC (-1))))))
CollapseTHENA (
  (Auto_aux (first_nat 1:n) ((first_nat 1:n),(first_nat 3:n)) (first_tok :t) inil_term)))
)
CollapseTHEN (HypSubst (-1) (-3))))
CollapseTHEN ((Auto_aux (first_nat 1:n)
  ) ((first_nat 1:n),(first_nat 3:n)) (first_tok :t) inil_term)))

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1:

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7. (x  $\in$  [])
8.  $\neg(x = \text{last}([u / v]))$ 
9. v = []
 $\vdash \text{False}$ 

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