

Inference at * 1
of proof for Lemma before-hd:

1. $T : \text{Type}$
 2. $L : T \text{ List}$
 3. $0 < \|L\|$
 4. $\text{no_repeats}(T;L)$
 5. $x : T$
 6. $x \text{ before } \text{hd}(L) \in L$
 7. $\forall x, y:T. x \text{ before } y \in L \Rightarrow (\neg(x = y))$
- $\vdash \text{False}$

by (((FHyp (-1) [-2])
CollapseTHENA (Auto·))·)
CollapseTHEN (((
 InstLemma 'hd-before' [T;L;x])
 CollapseTHENA (((Auto·)
 CollapseTHEN (((
 FLemma 'l.before_member2' [-3])
 CollapseTHEN (Auto·))·))·))·

1:

8. $\neg(x = \text{hd}(L))$
 9. $\text{hd}(L) \text{ before } x \in L$
- $\vdash \text{False}$
- .