

Inference at * 1 2 1 2 1
of proof for Lemma adjacent-append:

1. $T : \text{Type}$
2. $x : T$
3. $y : T$
4. $L_1 : T \text{ List}$
5. $L_2 : T \text{ List}$
6. $i : \{0..((\|L_1\| + \|L_2\|) - 1)^-\}$
7. $x = (L_1 @ L_2)[i]$
8. $y = (L_1 @ L_2)[(i+1)]$
9. $\neg(i < \|L_1\|)$

$\vdash y = L_2[(i - \|L_1\|) + 1]$
 by ((RWO "select_append_back" (-2))
 CollapseTHEN (((Auto')
 CollapseTHEN (((
 NthHypSq (-2))
 CollapseTHEN ((if (((first_nat 2:n)) = 0) then (Repeat (((EqCD)

CollapseTHEN ((Try (Trivial)).)).) else (RepeatFor (first_nat 2:n) (((EqCD)

CollapseTHEN ((Try (Trivial)).)).)).)).)).).

1:

8. $y = L_2[((i+1) - \|L_1\|)]$
9. $\neg(i < \|L_1\|)$

$\vdash ((i - \|L_1\|) + 1) \sim ((i+1) - \|L_1\|)$