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

1. T : Type
2. x : T
3. y : T
4. L_1 : T List
5. L_2 : T 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. $i < \|L_1\|$
10. $i < (\|L_1\|$ - $1)$

$\vdash \exists i{:}\{0..(\|L_1\|$ - $1)^-\}.\ (x = L_1[i]\ \&\ y = L_1[(i+1)])$

by ((((RWO "select_append_front" (-4))
CollapseTHENA (Auto'))·)
CollapseTHEN (((((
RWO "select_append_front" (-3))
CollapseTHENA (Auto'))·)
CollapseTHEN (((InstConcl [
i])
CollapseTHEN (Auto·))·))·))·

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http://www.nuprl.org/FDLcontent/p0_963683_/p39_372879_{adjacent-append}1_1_1_1.html