Inference at $*$ 1 2 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 : $\{0..(\|L_1 \mathbin{@} L_2\| - 1)^-\}$
7. $x = (L_1 \mathbin{@} L_2)[i]$
8. $y = (L_1 \mathbin{@} L_2)[(i+1)]$
9. $\neg(i < \|L_1\|)$

$\vdash \exists i{:}\{0..(\|L_2\| - 1)^-\}.\ (x = L_2[i]\ \&\ y = L_2[(i+1)])$
by ((InstConcl [i - $\|L_1\|$])
CollapseTHEN (Auto'))·

1:

$\vdash x = L_2[(i - \|L_1\|)]$

2:

$\vdash y = L_2[((i - \|L_1\|)+1)]$

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