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

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

```
  by ((RWO "select_append_back" (-3))
  CollapseTHEN (((Auto')
  CollapseTHEN (((
    All ArithSimp)
  CollapseTHEN (Auto·))·))·))·
```

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http://www.nuprl.org/FDLcontent/p0_963683_/p39_372879_{adjacent-append}1_2_1_1.html