

Inference at \* 2 2 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.  $0 < \|L_1\|$ 
7.  $0 < \|L_2\|$ 
8.  $x = \text{last}(L_1)$ 
9.  $y = \text{hd}(L_2)$ 
 $\vdash y = L_2[\text{if } (\|L_1\| - 1) + 1 \text{ then } x \text{ else } ()]$ 
  by ((DVar 'L2')
    CollapseTHEN (((All Reduce)
    CollapseTHEN (Auto')))).

```

1:

```

5.  $u : T$ 
6.  $v : T \text{ List}$ 
7.  $0 < \|L_1\|$ 
8.  $0 < (\|v\| + 1)$ 
9.  $x = \text{last}(L_1)$ 
10.  $y = u$ 
 $\vdash y = [u / v][\text{if } (\|L_1\| - 1) + 1 \text{ then } x \text{ else } ()]$ 
.

```