

Inference at \* 1 1  
of proof for Lemma adjacent-before:

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1.  $T : \text{Type}$ 
2.  $L : T \text{ List}$ 
3.  $x : T$ 
4.  $y : T$ 
5.  $i : \{0..(\|L\| - 1)^-\}$ 
6.  $x = L[i]$ 
7.  $y = L[(i+1)]$ 
8.  $i@_0 : \{0..1^-\}$ 
 $\vdash$ if ( $i@_0 =_0 0$ ) then  $i$  else  $i+1$  fi < if ( $i@_0+1 =_0 0$ ) then  $i$  else  $i+1$  fi
  by InteriorProof (if (((first_nat 2:n)) = 0) then (Repeat (((SplitOnConclITE)
                                CollapseTHEN (Auto')))) else (RepeatFor (first_nat 2:n) (((
                                SplitOnConclITE)
                                CollapseTHEN (Auto'))))))).

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