Inference at $*$ 1 2
 of proof for Lemma adjacent-before:

1. T : Type
2. L : T List
3. x : T
4. y : T
5. i : $\{0..(\|L\| - 1)^-\}$
6. $x = L[i]$
7. $y = L[(i+1)]$
8. $\forall i@_0$:$\{0..1^-\}$. if $(i@_0 =_0 0)$ then i else $i+1$ fi $<$ if $(i@_0+1 =_0 0)$ then i else $i+1$ fi
9. j : $\{0..2^-\}$

$\vdash [x; y][j] = L[$if $(j =_0 0)$ then i else $i+1$ fi $]$

```
 by ((((CaseNat 0 'j')
 CollapseTHEN (((Reduce 0)
 CollapseTHEN ((Try (Trivial))·))·))·
   )
 CollapseTHEN (((((CaseNat 1 'j')
 CollapseTHEN (((Reduce 0)
 CollapseTHEN ((Try (
   Trivial))·))·))·)
 CollapseTHEN (Auto'))·))·

   .
```