Inference at $*$ 1
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. $y = L[(i+1)]$

$\vdash \exists f{:}\{0..2^{-}\} \rightarrow \{0..\|L\|^{-}\}.$ (increasing(f;2) & ($\forall j{:}\{0..2^{-}\}.$ $[x; y][j] = L[(f(j))]$))

by ((((InstConcl [λj.if ($j =_0 0$) then i else i+1 fi])
CollapseTHENA (Auto'))·)

CollapseTHEN (((RepUR "increasing" (0)·)
CollapseTHEN (MaAuto·))·))·

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

2:

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]

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