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sublist_pair  THM

⊢  ∀T:Type, L:T List, i,j:ℕ||L||. i<j ⇒ [L[i]; L[j]] ⊆ L
| by Auto THEN Unfold ‘sublist‘ 0 THEN Reduce 0
THEN InstConcl [λn.
|    if n=₂0→ i else j fi] THENA Auto’

|    THEN Try (Unfold ‘label‘ 0 THEN Reduce 0 THEN Auto)

|    THEN Unfold ‘increasing‘ 0 THEN Reduce 0 THEN Auto
|
|
|\
| 1. T : Type
| 2. L : T List
| 3. i : ℕ||L||
| 4. j : ℕ||L||
| 5. i<j
| 6. i@0 : ℕ1
| ⊢  if i@0=₂0→ i else j fi<if i@0+1=₂0→ i else j fi
|   by Subst’ i@0 = 0 0 THEN Reduce 0 THEN Auto
|
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. 1. T : Type
. 2. L : T List
. 3. i : ℕ||L||
. 4. j : ℕ||L||
. 5. i<j
. 6. j@0 : ℕ2
. ⊢  [L[i]; L[j]][j@0] = L[if j@0=₂0→ i else j fi]
. | by CaseNat 0 ‘j@0’ THEN Reduce 0 THEN Auto’
. |
. 1. T : Type
. 2. L : T List
. 3. i : ℕ||L||
. 4. j : ℕ||L||
. 5. i<j
. 6. j@0 : ℕ2
. 7. ¬j@0 = 0
. ⊢  [L[i]; L[j]][j@0] = L[if j@0=₂0→ i else j fi]
.   by Subst’ j@0 = 1 0 THEN Reduce 0 THEN Auto
END
```