

Inference at \* 2 1  
of proof for Lemma nth\_tl\_append:

```
1. T : Type
2. T List
3. u : T
4. v : T List
5. bs : T List
6. nth_tl(||v||;v @ bs) ~ bs
⊢nth_tl(||v||+1;[u / (v @ bs)]) ~ bs
  by (((RecUnfold 'nth_tl' 0)
CollapseTHEN (((if (0
) =0 then SplitOnConclITE else SplitOnHypITE (0)).)
CollapseTHEN (Reduce 0)).).)
CollapseTHEN ((Try ((Complete (Auto')).)).).)
```

1:

```
7. 0 < (||v||+1)
⊢ nth_tl((||v||+1) - 1;v @ bs) ~ bs
```