Inference at $*$ 2 1 1 1
of proof for Lemma nth_tl_append:

1. T : Type
2. T List
3. T
4. v : T List
5. bs : T List
6. nth_tl($\|v\|$;v @ bs) $\sim$ bs
7. $0 < (\|v\|+1)$

$\vdash$ (($\|v\|$+1) - 1) $\sim$ $\|v\|$
by Auto'

.