```
append_firstn_lastn_sq  THM

⊢  ∀L:Top List, n:{0...||L||}. (firstn(n;L) @ nth_tl(n;L)) ~ L
  by (Analyze 0) THEN (ListInd -1) THEN (RecUnfold ‘firstn‘ 0)
     THEN
     (RecUnfold ‘nth_tl‘ 0)
     THEN
     (Reduce 0)
     THEN
     (Analyze 0)
     THEN
     (Repeat SplitOnConclITE)
     THEN
     (Reduce 0)
     THEN
     (Try (Complete Auto))
     THEN
     Analyze
     THEN
     EasyHyp
END
```