

Inference at \* 1 1  
of proof for Lemma decidable\_or:

1.  $P : \mathbb{P}$
2.  $Q : \mathbb{P}$
3.  $P$
4.  $Q$

$\vdash (P \vee Q) \vee (\neg(P \vee Q))$   
by (((DNth 1 0)  
CollapseTHENM (DNth 1 0)).)  
CollapseTHEN ((Auto\_aux (first\_nat 1:n  
) ((first\_nat 1:n),(first\_nat 3:n)) (first\_tok :t) inil\_term))).