

Inference at * 1 4
of proof for Lemma decidable_implies:

```
1. P :  $\mathbb{P}$ 
2. Q :  $\mathbb{P}$ 
3.  $\neg P$ 
4.  $\neg Q$ 
 $\vdash (P \Rightarrow Q) \vee (\neg(P \Rightarrow Q))$ 
  by ((DNth 1 0)
    CollapseTHEN ((Auto_aux (first_nat 1:n) ((first_nat 1:n),(first_nat 3:n)
      )) (first_tok :t) inil_term)))
```