

Inference at \* 1 2  
of proof for Lemma decidable\_implies:

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

1:

```
5.  $P \Rightarrow Q$ 
 $\vdash \text{False}$ 
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