

Inference at * 1 2
of proof for Lemma decidable_and:

```
1. P :  $\mathbb{P}$ 
2. Q :  $\mathbb{P}$ 
3.  $\neg P$ 
4. Q
 $\vdash (P \wedge Q) \vee (\neg(P \wedge Q))$ 
  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))).
```