

Inference at * 1 3
of proof for Lemma decidable_and:

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

```