

Inference at * 1 1
of proof for Lemma decidable_and:

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