

Inference at *
of proof for Lemma decidable_and:

```
⊢∀P,Q:ℙ. Dec(P) ⇒ Dec(Q) ⇒ Dec(P ∧ Q)
  by ((TryOnAllClauses (Unfold 'decidable'))
      CollapseTHEN ((Auto_aux (first_nat 1:n
                              ) ((first_nat 1:n),(first_nat 3:n)) (first_tok :t) inil_term))))
```

1:

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