

Inference at * 2
of proof for Lemma decidable_functionality:

```
1. P :  $\mathbb{P}$ 
2. Q :  $\mathbb{P}$ 
3. P  $\iff$  Q
4. Dec(Q)
 $\vdash$ Dec(P)
  by ((Using ['A',Q] (BackThruLemma 'iff_preserves_decidability'))
      CollapseTHEN (
        (Auto_aux (first_nat 1:n) ((first_nat 1:n),(first_nat 4:n)) (first_tok :t) inil_term)))·

1:
   $\vdash$  Dec(Q)
2:
   $\vdash$  Q  $\iff$  P
.
```