

Inference at \*  
of proof for Lemma p-id-compose:

```
⊢∀A, B:Type, f:(A→(B + Top)). p-id() o f = f
  by (Auto·)
  CollapseTHEN (((Unfold 'p-compose' ( 0)·)
  CollapseTHEN ((Ext)

    CollapseTHEN (Reduce 0)·)·)
  CollapseTHEN (((Try ((Complete (MaAuto·))·)·)·)·)

    CollapseTHEN (((Try ((Fold 'p-compose' 0)
  CollapseTHEN (Auto·)·)·)·)
  CollapseTHEN ((
    (if (0) =0 then SplitOnConclITE else SplitOnHypITE (0))·)
  THEN (Auto·)·)·)·)·)·)
```

1: . . . .truecase. . . . NILNIL

1.  $A : \text{Type}$
  2.  $B : \text{Type}$
  3.  $f : A \rightarrow (B + \text{Top})$
  4.  $x : A$
  5.  $\uparrow \text{can-apply}(f;x)$
- $\vdash \text{p-id}()(\text{do-apply}(f;x)) = f(x)$
- .