

Inference at * 1
of proof for Lemma trans_rel_self_functionality:

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1.  $T : \text{Type}$ 
2.  $R : T \rightarrow T \rightarrow \mathbb{P}$ 
3.  $\forall a, b, c:T. R(a,b) \Rightarrow R(b,c) \Rightarrow R(a,c)$ 
4.  $a : T$ 
5.  $a' : T$ 
6.  $b : T$ 
7.  $b' : T$ 
8.  $R(b,a)$ 
9.  $R(a',b')$ 
10.  $R(a,a')$ 
 $\vdash R(b,b')$ 
  by (((FHyp 3 [9;10])
    CollapseTHENM (FHyp 3 [8;11]))·)
  CollapseTHEN (
    (Auto_aux (first_nat 1:n) ((first_nat 1:n),(first_nat 4:n)) (first_tok :t) inil_term)))·
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