

Inference at * 2
of proof for Lemma trans_rel_func_wrt_sym_self:

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1.  $T : \text{Type}$ 
2.  $R : T \rightarrow T \rightarrow \mathbb{P}$ 
3.  $\text{Trans}(T; x, y. R(x, y))$ 
4.  $a : T$ 
5.  $a' : T$ 
6.  $b : T$ 
7.  $b' : T$ 
8.  $R(a, b)$ 
9.  $R(b, a)$ 
10.  $R(a', b')$ 
11.  $R(b', a')$ 
12.  $R(b, b')$ 
 $\vdash R(a, a')$ 
  by ((FLemma 'trans_rel_self_functionality' [3])
CollapseTHEN ((Auto_aux (first_nat
  1:n) ((first_nat 1:n), (first_nat 3:n)) (first_tok :t) inil_term)))·

1:

13.  $\forall a, a', b, b':T. R(b, a) \Rightarrow R(a', b') \Rightarrow R(a, a') \Rightarrow R(b, b')$ 
 $\vdash R(a, a')$ 
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