Inference at $*$ 1
of proof for Lemma trans_rel_self_functionality:

1. T : Type
2. R : $T \to T \to \mathbb{P}$
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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http://www.nuprl.org/FDLcontent/p0_942988_/p121_81988_{trans_rel_self_functionality}1.html