

Inference at * 3
of proof for Lemma equiv_rel_subtyping:

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1. T : Type
2. R : T → T → Type
3. Q : T →  $\mathbb{P}$ 
4.  $\forall a:T. R(a,a)$ 
5.  $\forall a, b:T. R(a,b) \Rightarrow R(b,a)$ 
6.  $\forall a, b, c:T. R(a,b) \Rightarrow R(b,c) \Rightarrow R(a,c)$ 
7.  $a : \{z:T \mid Q(z)\}$ 
8.  $b : \{z:T \mid Q(z)\}$ 
9.  $c : \{z:T \mid Q(z)\}$ 
10.  $R(a,b)$ 
11.  $R(b,c)$ 
 $\vdash R(a,c)$ 
  by ((FHyp 6 [10;11])
  CollapseTHEN ((Auto_aux (first_nat 1:n) ((first_nat 1:n
    ),(first_nat 3:n)) (first_tok :t) inil_term))))

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