Inference at * 1 1
 of proof for Lemma equiv_rel_functionality_wrt_iff:

1. T : Type
2. T' : Type
3. E : $T \to T \to \mathbb{P}$
4. E' : $T' \to T' \to \mathbb{P}$
5. $T = T'$
6. $\forall x, y{:}T.\ E(x,y) \iff E'(x,y)$

$\vdash$ $(\forall a{:}T.\ E(a,a))$
 & $(\forall a, b{:}T.\ E(a,b) \Rightarrow E(b,a))$
 & $(\forall a, b, c{:}T.\ E(a,b) \Rightarrow E(b,c) \Rightarrow E(a,c)))$
 $\iff$ $((\forall a{:}T'.\ E'(a,a))$
  & $(\forall a, b{:}T'.\ E'(a,b) \Rightarrow E'(b,a))$
  & $(\forall a, b, c{:}T'.\ E'(a,b) \Rightarrow E'(b,c) \Rightarrow E'(a,c)))$
 by InteriorProof ((RW (HigherC (HypC 6)) 0)
 CollapseTHENA ((Auto_aux (first_nat 1:n
) ((first_nat 1:n),(first_nat 3:n)) (first_tok :t) inil_term)))·

1:

$\vdash$ $(\forall a{:}T.\ E'(a,a))$
 & $(\forall a, b{:}T.\ E'(a,b) \Rightarrow E'(b,a))$
 & $(\forall a, b, c{:}T.\ E'(a,b) \Rightarrow E'(b,c) \Rightarrow E'(a,c)))$
 $\iff$ $((\forall a{:}T'.\ E'(a,a))$
  & $(\forall a, b{:}T'.\ E'(a,b) \Rightarrow E'(b,a))$
  & $(\forall a, b, c{:}T'.\ E'(a,b) \Rightarrow E'(b,c) \Rightarrow E'(a,c)))$

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http://www.nuprl.org/FDLcontent/p0_942988_/p121_81922_{equiv_rel_functionality_wrt_iff}1_1.html