Inference at $*$ 3 1
 of proof for Lemma squash_thru_equiv_rel:

1. T : Type
2. E : $T \to T \to \mathbb{P}$
3. $(\forall a{:}T.\ E(a,a))$ & $(\forall a,\ b{:}T.\ E(a,b) \Rightarrow E(b,a))$ & $(\forall a,\ b,\ c{:}T.\ E(a,b) \Rightarrow E(b,c) \Rightarrow E(a,c))$
4. a : T
5. b : T
6. c : T
7. $E(a,b)$
8. $E(b,c)$

$\vdash E(a,c)$

 by ((Sel 3 (FwdThruHyp 3 [7;8]))
 CollapseTHEN ((Auto_aux (first_nat 1:n) ((first_nat
 1:n),(first_nat 4:n)) (first_tok :t) inil_term)))·

 .