Inference at * 1 2
 of proof for Lemma connex_iff_trichot:

1. T : Type
2. R : $T \to T \to \mathbb{P}$
3. $\forall a, b{:}T.$ Dec($R(a,b)$)
4. $\forall a, b{:}T.$ ($R(a,b)$ & ($\neg R(b,a)$)) $\vee$ ($R(a,b)$ & $R(b,a)$) $\vee$ ($R(b,a)$ & ($\neg R(a,b)$))
5. x : T
6. y : T

$\vdash$ $R(x,y) \vee R(y,x)$

 by (% This side doesn't need decidability %
((((InstHyp [x;y] 4)
 CollapseTHENM (
  ProveProp))·)
 CollapseTHENA ((Auto_aux (first_nat 1:n) ((first_nat 1:n),(first_nat 3:n
  )) (first_tok :t) inil_term)))·)

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