Inference at $*$ 2
 of proof for Lemma dec_iff_ex_bvfun:

1. T : Type
2. E : $T \to T \to \mathbb{P}$
3. $\exists f{:}T \to T \to \mathbb{B}$. ($\forall x$, $y{:}T$. ($\uparrow(f(x,y))) \iff (E(x,y))$)
4. x : T
5. y : T

$\vdash$ Dec($E(x,y)$)
 by ((D 3)
 CollapseTHENA ((Auto_aux (first_nat 1:n) ((first_nat 1:n),(first_nat 1000:n
 )) (first_tok :t) inil_term)))·

1:

3. f : $T \to T \to \mathbb{B}$
4. $\forall x$, $y{:}T$. ($\uparrow(f(x,y))) \iff (E(x,y))$
5. x : T
6. y : T

$\vdash$ Dec($E(x,y)$)

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