

Inference at * 1
of proof for Lemma dec_iff_ex_bvfun:

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1. T : Type
2. E : T → T → ℙ
3. ∀ x, y : T. Dec(E(x,y))
⊢ ∃ f : T → T → ℙ. (∀ x, y : T. (↑(f(x,y))) ⇔ (E(x,y)))
  by ((((((RenameVar 'g' 3)
CollapseTHENM (Unfold 'decidable' 3)).)
CollapseTHENM (((
  With λ x, y. case g(x,y) of inl(a) => tt | inr(b) => ff (D 0))
CollapseTHENA (
  (Auto_aux (first_nat 1:n) ((first_nat 1:n),(first_nat 3:n)) (first_tok :t) inil_term))))).)
CollapseTHENM (Reduce 0)).

1:

3. g : ∀ x, y : T. (E(x,y)) ∨ (¬(E(x,y)))
⊢ ∀ x, y : T. (↑case g(x,y) of inl(a) => tt | inr(b) => ff) ⇔ (E(x,y))
.

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