

Inference at * 2
of proof for Lemma dec_iff_ex_bvfun:

```

1. T : Type
2. E : T → T → ℙ
3. ∃ f : T → T → ℙ. (∀ x, y : T. (↑(f(x,y))) ⇔ (E(x,y)))
4. x : T
5. y : T
⊢ Dec(E(x,y))
  by ((D 3)
    CollapseTHEN (Auto_aux (first_nat 1:n) ((first_nat 1:n),(first_nat 1000:n)
    )) (first_tok :t) inil_term)))

```

1:

```

3. f : T → T → ℙ
4. ∀ x, y : T. (↑(f(x,y))) ⇔ (E(x,y))
5. x : T
6. y : T
⊢ Dec(E(x,y))
.

```