

Inference at \* 1 1 1 1 1  
of proof for Lemma `decidable__quotient_equal`:

1.  $T : \text{Type}$
2.  $E : T \rightarrow T \rightarrow \mathbb{P}$
3.  $\text{EquivRel}(T; x, y. E(x, y))$
4.  $f : T \rightarrow T \rightarrow \mathbb{B}$
5.  $\forall x, y : T. (\uparrow(x \ f \ y)) \iff E(x, y)$
6.  $u : x, y : T // E(x, y)$

$\vdash f(u) \in (x, y : T // E(x, y)) \rightarrow \mathbb{B}$   
by (D 6)  
CollapseTHENA ((Auto\_aux (first\_nat 1:n) ((first\_nat 1:n), (first\_nat 3:n)) (first\_tok :t) inil\_term)).

1:

6.  $u_1 : T$
7.  $u_2 : T$
8.  $E(u_1, u_2)$

$\vdash f(u_1) = f(u_2)$

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