

Inference at *
of proof for Lemma choicef_wf:

$\vdash \forall xm:XM, T:\text{Type}, P:(T \rightarrow \mathbb{P}). (\exists a:T. P(a)) \Rightarrow ((\exists x:T. P(x)) \in T)$
by ((((((UnivCD
CollapseTHEN ((Auto_aux (first_nat 1:n) ((first_nat 1:n),(first_nat
3:n)) (first_tok :t) inl_term))))).
CollapseTHEN (Unfold 'choicef' 0)).)

CollapseTHEN (RepUnfolds "xmiddle decidable" 1)).

1:

1. $xm : \forall P:\mathbb{P}. P \vee (\neg P)$
 2. $T : \text{Type}$
 3. $P : T \rightarrow \mathbb{P}$
 4. $\exists a:T. P(a)$
- $\vdash \text{case } xm(\{y:T \mid P(y)\}) \text{ of } \text{inl}(z) => z \mid \text{inr}(w) => "???" \in T$
.