

Inference at \*  
of proof for Lemma can-apply-mu':

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⊢∀A:Type, P:(A→ℕ→ℕ), d:(∀x:A. Dec(∃n:ℕ. (↑(P(x,n))))), x:A.
(↑can-apply(mu'(P);x)) ⇔ (∃n:ℕ. (↑(P(x,n))))
by (UnivCD THENA Auto)
CollapseTHEN ((RepUR "mu\' can-apply" ( 0)·)
CollapseTHEN (
(Subst' TERMOF{p-mu-decider:ObjectId, 1:l, 1:l}
~
TERMOF{p-mu-decider:ObjectId, 1:l, i:l} ( 0)·)
THENL [(
RW (SubC (ComputeToC [] ) 0)
CollapseTHEN (Trivial)· ; Id]·)·)·

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1:

1.  $A : \text{Type}$
  2.  $P : A \rightarrow \mathbb{N} \rightarrow \mathbb{N}$
  3.  $d : \forall x:A. \text{Dec}(\exists n:\mathbb{N}. (\uparrow(P(x,n))))$
  4.  $x : A$
- ⊢ (↑isl((TERMOF{p-mu-decider:ObjectId, 1:l, i:l}(A,P,d,x)).1))  
⇔ (∃n:ℕ. (↑(P(x,n))))