Inference at $*$ 1
of proof for Lemma exists_functionality_wrt_implies:

1. S : Type
2. T : Type
3. P : $S \rightarrow \mathbb{P}$
4. Q : $S \rightarrow \mathbb{P}$
5. $S = T$
6. $\forall x{:}S.\ P(x) \Rightarrow Q(x)$
7. $\exists x{:}S.\ P(x)$

$\vdash \exists y{:}T.\ Q(y)$

by ((((((D 7)
CollapseTHEN (With x (D 0)))·)
CollapseTHENM (HypBackchain))·)

CollapseTHEN ((Auto_aux (first_nat 1:n) ((first_nat 1:n),(first_nat 3:n)) (first_tok :t
) inil_term)))·

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http://www.nuprl.org/FDLcontent/p0_942988_/p121_98938_{exists_functionality_wrt_implies}1.html