

Inference at * 2 0
of proof for Lemma exists_functionality_wrt_iff:

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

 $\vdash \exists x:S. P(x)$
by PERMUTE{1:n, 1:n, 2:n}

1:wf..... NILNIL

7. $y : T$

8. $Q(y)$

$\vdash y \in S$

2:wf..... NILNIL

7. $y : T$

8. $Q(y)$

9. $x : S$

$\vdash P(x) \in \mathbb{P}$

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