

Inference at * 1 1 1 1
of proof for Lemma inv_image_ind_tp:

1. $T : \text{Type}$
2. $r : T \rightarrow T \rightarrow \mathbb{P}$
3. $S : \text{Type}$
4. $f : S \rightarrow T$
5. $\text{WellFnd}\{i\}(T; x, y. r(x, y))$
6. $P : S \rightarrow \mathbb{P}$
7. $\forall j : S. (\forall k : S. r(f(k), f(j)) \Rightarrow P(k)) \Rightarrow P(j)$
8. $n : S$
- $\vdash P(n)$
by (%S%

\p.let x = get_distinct_var 'x' p
inlet n = get_var_arg 'n' p

in let S = get_term_arg 'S' p
inlet T = get_term_arg 'T' p

in let f = get_term_arg 'f' p
in

Assert

(mk_all_term x T
(
mk_all_term n S
(mk_implies_term
(mk_equal_term T (
mk_apply_term f (mvt n)) (mvt x))
(concl p)))) p)

1:assertion..... NILNIL

$\vdash \forall x : T, n : S. (f(n) = x) \Rightarrow P(n)$

2:

9. $\forall x : T, n : S. (f(n) = x) \Rightarrow P(n)$

$\vdash P(n)$

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