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

1. T : Type
2. r : $T \to T \to \mathbb{P}$
3. S : Type
4. f : $S \to T$
5. WellFnd{i}(T;x,y.$r(x,y)$)
6. P : $S \to \mathbb{P}$
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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