

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

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1. T : Type
2. r : T → T → ℙ
3. S : Type
4. f : S → T
5. WellFnd{i}(T;x,y.r(x,y))
6. P : S → ℙ
7. ∀j:S. (∀k:S. r(f(k),f(j)) ⇒ P(k)) ⇒ P(j)
8. S
9. j : T
10. ∀k:T. r(k,j) ⇒ (∀y:S. (f(y) = k) ⇒ P(y))
11. y : S
12. f(y) = j
⊢ P(y)
  by ((% Establish inductive hypothesis %
Assert ∀y':S. r(f(y'),f(y)) ⇒ P(y'))

  CollapseTHEN (IfLabL
['main',OnHyps [12;10;9;8] Thin % cleanup %
;assertion',
((RepD)
CollapseTHENA ((Auto_aux (first_nat 1:n) ((first_nat 1:n),(first_nat 3:n)
)) (first_tok :t) inil_term))))].

1:

  13. y' : S
  14. r(f(y'),f(y))
  ⊢ P(y')
2:

  8. y : S
  9. ∀y':S. r(f(y'),f(y)) ⇒ P(y')
  ⊢ P(y)
.

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