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

1. A : Type
2. B : Type
3. f : $A \rightarrow B$
4. $\forall a_1, a_2{:}A.\ (f(a_1) = f(a_2)) \Rightarrow (a_1 = a_2)$
5. g : $B \rightarrow A$
6. $\forall b{:}B.\ f(g(b)) = b$

$\vdash$ InvFuns(A;B;f;g)
by D 0

1:

$\vdash (g \circ f) = \mathrm{Id}\{A\}$

2:

$\vdash (f \circ g) = \mathrm{Id}\{B\}$

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