

Inference at * 1 1
of proof for Lemma decidable_atom_equal:

1. $a : \text{Atom}$
2. $b : \text{Atom}$
 \vdash if $a=b$ then $\text{inl } Ax$ else $(\text{inr } (\lambda x.x)) \in ((a = b) \vee (\neg(a = b)))$
by MemberEqCD

1:subterm..... T:t1:n

$\vdash a \in \text{Atom}$

2:subterm..... T:t2:n

$\vdash b \in \text{Atom}$

3:subterm..... T:t3:n

3. $a = b$

$\vdash (\text{inl } Ax) \in ((a = b) \vee (\neg(a = b)))$

4:subterm..... T:t4:n

3. $\neg(a = b)$

$\vdash (\text{inr } (\lambda x.x)) \in ((a = b) \vee (\neg(a = b)))$

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