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

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

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

$\vdash$ $a \in$ Atom
2: . . . . .subterm. T:t2:n

$\vdash$ $b \in$ Atom
3: . . . . .subterm. T:t3:n

3. $a = b$
$\vdash$ (inl Ax) $\in$ $((a = b) \vee (\neg(a = b)))$
4: . . . . .subterm. T:t4:n

3. $\neg(a = b)$
$\vdash$ (inr $(\lambda x.x)$) $\in$ $((a = b) \vee (\neg(a = b)))$
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http://www.nuprl.org/FDLcontent/p0_942988_/p121_102724_{decidable__atom_equal}1_1.html