Inference at $*$ 1 0
of proof for Lemma eq_atom_eq_false_elim:

1. x : Atom
2. y : Atom
3. $x =_{\mathrm{a}} y = \mathrm{ff}$

$\vdash \neg(x = y)$

by PERMUTE{1:n, 2:n, 3:n, 4:n, 2:n, 5:n, 3:n, 4:n, 6:n, 7:n, 8:n, 9:n, 10:n}

1: .....wf..... NILNIL

$\vdash (x =_{\mathrm{a}} y = \mathrm{ff}) \in \mathbb{P}_1$

2: .....wf..... NILNIL

$\vdash (\uparrow(\neg_b x =_{\mathrm{a}} y)) \in \mathbb{P}_1$

3: .....wf..... NILNIL

$\vdash (\neg(x = y)) \in \mathbb{P}_1$

4: .....wf..... NILNIL

$\vdash x =_{\mathrm{a}} y \in \mathbb{B}$

5: .....wf..... NILNIL

$\vdash (\neg(\uparrow x =_{\mathrm{a}} y)) \in \mathbb{P}_1$

6: .....wf..... NILNIL

$\vdash (\uparrow x =_{\mathrm{a}} y) \in \mathbb{P}_1$

7: .....wf..... NILNIL

$\vdash (x = y) \in \mathbb{P}_1$

8: .....wf..... NILNIL

$\vdash x \in \mathrm{Atom}$

9: .....wf..... NILNIL

$\vdash y \in \mathrm{Atom}$

10:

3. $\neg(x = y)$

$\vdash \neg(x = y)$

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