Inference at $*$ 1 2 1
 of proof for Lemma equiv_rel_self_functionality:

1. T : Type
2. R : $T \to T \to \mathbb{P}$
3. $\forall a{:}T.\ R(a,a)$
4. $\forall a,\ b{:}T.\ R(a,b) \Rightarrow R(b,a)$
5. $\forall a,\ b,\ c{:}T.\ R(a,b) \Rightarrow R(b,c) \Rightarrow R(a,c)$
6. a : T
7. a' : T
8. b : T
9. b' : T
10. $R(a,b)$
11. $R(a',b')$
12. $R(b,b')$

$\vdash R(a,a')$

```
  by ((((((FHyp 4 [11])
  CollapseTHENM (FHyp 5 [10;12]))·)
  CollapseTHENM (
    FHyp 5 [13;14]))·)
  CollapseTHEN ((Auto_aux (first_nat 1:n) ((first_nat 1:n
    ),(first_nat 4:n)) (first_tok :t) inil_term)))·

    .
```

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http://www.nuprl.org/FDLcontent/p0_942988_/p121_81216_{equiv_rel_self_functionality}1_2_1.html