

Inference at * 2 2 1
of proof for Lemma member-zip:

```

1. A : Type
2. B : Type
3. A List
4. u : A
5. v : A List
6.  $\forall ys:(B \text{ List}), x:A, y:B. (<x, y> \in \text{zip}(v;ys)) \Rightarrow \{(x \in v) \ \& \ (y \in ys)\}$ 
7. B List
8.  $u_1 : B$ 
9.  $v_1 : B \text{ List}$ 
10.  $\forall x:A, y:B. (<x, y> \in \text{zip}([u \ / \ v];v_1)) \Rightarrow \{(x \in [u \ / \ v]) \ \& \ (y \in v_1)\}$ 
11.  $x : A$ 
12.  $y : B$ 
13.  $<x, y> = <u, u_1>$ 
 $\vdash \{(x \in [u \ / \ v]) \ \& \ (y \in [u_1 \ / \ v_1])\}$ 
  by EqHD (-1) THEN All Reduce THEN Auto

  THEN Unfold 'guard' 0 THEN RWO "cons_member" 0 THEN Auto
THEN OrLeft THEN Auto

```