```
member_reverse  THM

⊢  ∀T:Type, x:T, L:T List. (x ∈ rev(L)) ⟺ (x ∈ L)
| by (InductionOnList THEN (Reduce 0)
|     THEN
|     (RWW
|      Thm* ∀x:T, l1,l2:T List. (x ∈ l1 @ l2) ⟺ (x ∈ l1) ∨ (x ∈ l2)
|      {member_append}
|      0))
|    THEN
|    (RWW
|     Thm* ∀l:T List, a,x:T. (x ∈ [a / l]) ⟺ x = a ∨ (x ∈ l)
|     {cons_member}
|     0)
|
|\
| 1. T : Type
| 2. x : T
| 3. T List
| 4. u : T
| 5. v : T List
| 6. (x ∈ rev(v)) ⇒ (x ∈ v)
| 7. (x ∈ rev(v)) ⇐ (x ∈ v)
| 8. (x ∈ rev(v)) ∨ x = u ∨ (x ∈ nil)
| ⊢  x = u ∨ (x ∈ v)  by Obvious
|
.\
. 1. T : Type
. 2. x : T
. 3. T List
. 4. u : T
. 5. v : T List
. 6. (x ∈ rev(v)) ⇒ (x ∈ v)
. 7. (x ∈ rev(v)) ⇐ (x ∈ v)
. 8. x = u ∨ (x ∈ v)
. ⊢  (x ∈ rev(v)) ∨ x = u ∨ (x ∈ nil)  by Obvious
END
```