```
sfa_doc_sexpr_reverse_wf  THM

⊢  ∀A:Type, e:Sexpr(A). Reverse(e) ∈ Sexpr(A)
| by Guarding (∀e:Sexpr(A). <prop>) Auto
|
1. A : Type
⊢  ∀e:Sexpr(A). Reverse(e) ∈ Sexpr(A)  by AbRecTypeInd Concl
|
2. Q : Sexpr(A)→Prop
3. ∀e:{e:Sexpr(A)| Q(e) }. Reverse(e) ∈ Sexpr(A)
4. e : ({e:Sexpr(A)| Q(e) }×{e:Sexpr(A)| Q(e) })+A
⊢  Reverse(e) ∈ Sexpr(A)  by Analyze-1
|
|\
| 4. x1 : {e:Sexpr(A)| Q(e) }
| 5. x2 : {e:Sexpr(A)| Q(e) }
| ⊢  Reverse(Cons(x1;x2)) ∈ Sexpr(A)
| | by Compute ⌈Reverse(Cons(x1;x2))⌉ *⇒ Cons(Reverse(x2);Reverse(x1))
| |    THEN
| |    Analyze
| |
| |\
| | ⊢  Reverse(x2) ∈ Sexpr(A)  by BackThru: Hyp:3
| |
| .\
| . ⊢  Reverse(x1) ∈ Sexpr(A)  by BackThru: Hyp:3
|
.\
. 4. y : A
. ⊢  Reverse(Inj(y)) ∈ Sexpr(A)
.   by Compute ⌈Reverse(Inj(y))⌉ *⇒ Inj(y)
END
```