```
auto3_lang  THM

⊢  ∃n:ℕ2. n = 0 ⟺ (∃l:ℕ3*. LangOf(Auto₃)(l))
| by Inst
|    Thm* ∀Auto:Automata(Alph;St).
|         Fin(Alph) & Fin(St) ⇒ Dec(∃l:Alph*. LangOf(Auto)(l))
|    {empty_lang_dec}
|    [ℕ3;ℕ3;Auto₃]
|    THENA
|    (Auto THEN BackThru Thm* ∀n:ℕ. Fin(ℕn)    {nsub_is_finite})
|
1. Dec(∃l:ℕ3*. LangOf(Auto₃)(l))
⊢   by Analyze 1
|
|\
| 1. ∃l:ℕ3*. LangOf(Auto₃)(l)
| ⊢   by Witness 0 THEN Fold `languages` 0
|
.\
. 1. ¬(∃l:ℕ3*. LangOf(Auto₃)(l))
. ⊢   by Witness 1 THEN Fold `languages` 0
END
```