```
phole_lemma  THM

⊢  ∀n:{1...}, m:{n+1...}, f:(ℕm→ℕn). ∃i,j:ℕm. i<j & f(i) = f(j)
| by GenUnivCD
|
1. n : {1...}
2. m : {n+1...}
3. f : ℕm→ℕn
⊢  ∃i,j:ℕm. i<j & f(i) = f(j)
| by Inst
|     Thm* ∀n:{1...}, f:(ℕ(n+1)→ℕn). ∃i:ℕ(n+1), j:ℕi. f(i) = f(j)
|     {phole_aux}
|     [n;f]
|
4. ∃i:ℕ(n+1), j:ℕi. f(i) = f(j)
⊢   by ExRepD
|
4. i : ℕ(n+1)
5. j : ℕi
6. f(i) = f(j)
⊢   by InstConcl [j;i]
END
```