```
factorial_via_intseg_step  THM

⊢  ∀k,n:ℕ. k = n+1 ⇒ k! = k·n! ∈ ℕ
  by Def of <nat>!
     THEN
     BackThru:
     Thm*  ∀m,k:ℕ.
           1 ≤ m ≤ k
           ⇒
           (∀k',m':ℕ. k' = k-1 ⇒ m' = m-1 ⇒ k!m = k·k'!m' ∈ ℕ)
     {factorial_tail_via_iter_step}
END
```