```
factors_bound  THM

⊢  ∀i,j:ℕ+. i≤i·j & j≤i·j  by ∀i,j:ℕ+. i≤i·j  Asserted ...ℕ
|
|\
| 1. i : ℕ+
| 2. j : ℕ+
| ⊢  i≤i·j
|   by Inst:
|      Thm*  ∀i1,i2,j1,j2:ℕ. i1≤j1 ⇒ i2≤j2 ⇒ i1·i2≤j1·j2
|      {multiply_functionality_wrt_le}
|      Using:[i | 1 | i | j]
|
|\
| 1. ∀i,j:ℕ+. i≤i·j
| 2. i : ℕ+
| 3. j : ℕ+
| ⊢  i≤i·j  by BackThru: 1 ...wℕ
|
.\
. 1. ∀i,j:ℕ+. i≤i·j
. 2. i : ℕ+
. 3. j : ℕ+
. ⊢  j≤i·j
.   by Rewrite by Thm*  ∀a,b:ℤ. a·b = b·a    {mul_com} ...aℕ
.      THEN
.      BackThru: 1 ...wℕ
END
```