```
multiply_functionality_wrt_le  THM

⊢  ∀i1,i2,j1,j2:ℕ. i1≤j1 ⇒ i2≤j2 ⇒ i1·i2≤j1·j2  by Auto
|
1. i1 : ℕ
2. i2 : ℕ
3. j1 : ℕ
4. j2 : ℕ
5. i1≤j1
6. i2≤j2
⊢  i1·i2≤j1·j2
| by Inst: Thm* ∀a,b:ℤ, n:ℕ. a≤b ⇒ n·a≤n·b    {mul_preserves_le}
|    Using:[i2 | j2 | i1]
|    THEN
|    Inst: Thm* ∀a,b:ℤ, n:ℕ. a≤b ⇒ n·a≤n·b    {mul_preserves_le}
|    Using:[i1 | j1 | j2]
|
7. i1·i2≤i1·j2
8. j2·i1≤j2·j1
⊢  i1·i2≤j1·j2  by Auto
END
```