```
division1_sfa  THM

⊢  ∀k:ℕ+, r1,r2:ℕk, q1,q2:ℤ. q1·k+r1 = q2·k+r2 ⇒ q1 = q2 & r1 = r2
| by UnivCD
|
1. k : ℕ+
2. r1 : ℕk
3. r2 : ℕk
4. q1 : ℤ
5. q2 : ℤ
6. q1·k+r1 = q2·k+r2
⊢  q1 = q2 & r1 = r2  by AndToCandLocal Analyze
|
|\
| ⊢  q1 = q2  by ¬q1<q2 & ¬q1>q2  Asserted THEN 2 Times Analyze
| |
| |\
| | 7. q1<q2
| | ⊢  False
| |   by FwdThru:
| |      Thm* ∀a,b:ℤ, n:ℕ+. n·a<n·b ⇒ a<b    {mul_cancel_in_lt}
| |      on [ k·(q2-q1)<k·1 ]
| |
| .\
| . 7. q1>q2
| . ⊢  False
| .   by FwdThru:
| .      Thm* ∀a,b:ℤ, n:ℕ+. n·a<n·b ⇒ a<b    {mul_cancel_in_lt}
| .      on [ k·(q1-q2)<k·1 ]
|
.\
. 7. q1 = q2
. ⊢  r1 = r2  by Rewrite6 by q1 = q2 ∈ ℤ
END
```