```
mul_cancel_in_eq  THM

⊢  ∀a,b:ℤ, n:ℤ⁻⁰. n•a = n•b ⇒ a = b
| by SimilarTo ∀a,b:ℤ, n:ℕ⁺. n•a = n•b ⇒ a = b
|
|\
| 1. a : ℤ
| 2. b : ℤ
| 3. n : ℕ⁺
| 4. n•a = n•b
| ⊢  a = b
| | by Inst: Thm* ∀a,b:ℤ, n:ℕ⁺. n•a≤n•b ⇒ a≤b    {mul_cancel_in_le}
| |    Using:[a | b | n]
| |    THEN
| |    Inst: Thm* ∀a,b:ℤ, n:ℕ⁺. n•a≤n•b ⇒ a≤b    {mul_cancel_in_le}
| |    Using:[b | a | n]
| |
| 5. a≤b
| 6. b≤a
| ⊢  a = b  by Auto
|
.\
. 1. a : ℤ
. 2. b : ℤ
. 3. ∀n:ℕ⁺. n•a = n•b ⇒ a = b
. 4. n : ℤ⁻⁰
. 5. n•a = n•b
. ⊢  a = b  by Decide: 0<n
. |
. |\
. | 6. 0<n
. | ⊢  a = b  by BackThru: Hyp:3 Using:[n]
. |
. .\
. . 6. ¬0<n
. . ⊢  a = b  by BackThru: Hyp:3 Using:[-n]
END
```