```
prime_imp_atomic  THM

⊢  ∀a:ℤ. prime(a) ⇒ atomic(a)  by Unfolds [‘prime‘;‘atomic‘] 0
|
1. a : ℤ
2. ¬a = 0
3. ¬(a ∼ 1)
4. ∀b,c:ℤ. a | b•c ⇒ a | b ∨ a | c
⊢  ¬reducible(a)
| by (Analyze 0) THEN (Unfold ‘reducible‘ -1) THEN ExRepD
|
5. b : ℤ⁻⁰
6. c : ℤ⁻⁰
7. ¬(b ∼ 1)
8. ¬(c ∼ 1)
9. a = b•c
⊢  False  by (InstHyp [b;c] 4) THEN (Analyze 10)
|
|\
| .....antecedent .....
| ⊢  a | b•c  by (RevHypSubst 9 0) THEN RelRST
|
|\
| 10. a | b
| ⊢  False
|   by (HypSubst 9 10)
|      THEN
|      (FwdThru
|       Thm* ∀a:ℤ⁻⁰, b:ℤ. a•b | a ⇒ (b ∼ 1)    {self_divisor_mul}
|       [-1])
|
.\
. 10. a | c
. ⊢  False
.   by (HypSubst 9 10)
.      THEN
.      (RWH (LemmaC Thm* ∀a,b:ℤ. a•b = b•a    {mul_com}) 10)
.      THEN
.      (FwdThru
.       Thm* ∀a:ℤ⁻⁰, b:ℤ. a•b | a ⇒ (b ∼ 1)    {self_divisor_mul}
.       [10])
END
```