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formula_not_right_sat  THM

⊢  ∀hyp,M,N:Formula List, f:Formula, a:Assignment.
|  a |= <f.hyp,M @ N> ⟺ a |= <hyp,M @ (⌈◇⌉f.N)>
| by UnivCD THEN Analyze 0 THEN Analyze 0
|
|\
| 1. hyp : Formula List
| 2. M : Formula List
| 3. N : Formula List
| 4. f : Formula
| 5. a : Assignment
| 6. a |= <f.hyp,M @ N>
| ⊢  a |= <hyp,M @ (⌈◇⌉f.N)>
| | by OnHyps [-1;0]
| |    (λi.
| |     UnfoldTopAb i THEN AbReduce i
| |     THEN
| |     Rewrite
| |     (HigherC
| |      (LemmaC
| |       Thm* ∀P:(T→Prop), L,M:T List.
| |            ∃x∈(L @ M).P(x) ⟺ ∃x∈L.P(x) ∨ ∃x∈M.P(x)
| |       {list_exists_append_lemma}))
| |     i
| |     THEN
| |     AbReduce i)
| |
| 6. a |≠ f ∨ ∃F∈hyp.a |≠ F ∨ ∃F∈M.a |= F  ∨ ∃F∈N.a |= F
| ⊢  ∃F∈hyp.a |≠ F ∨ ∃F∈M.a |= F  ∨ a |= ⌈◇⌉f  ∨ ∃F∈N.a |= F
| | by Analyze -1 THEN Analyze -1
| |
| |\
| | 6. a |≠ f
| | ⊢   by Choose [2;2;1]
| | |
| | ⊢  a |= ⌈◇⌉f
| |   by BackThru
| |      Thm* ∀F:Formula, a:Assignment. a |= ⌈◇⌉F  ⟺ a |≠ F
| |      {formula_not_sat_lemma}
| |
| |\
| | 6. ∃F∈hyp.a |≠ F
| | ⊢   by Choose [1] THEN Trivial
| |
| |\
| | 6. ∃F∈M.a |= F
| | ⊢   by Choose [2;1] THEN Trivial
| |
| .\
| . 6. ∃F∈N.a |= F
| . ⊢   by Choose [2;2;2] THEN Trivial
|
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. 1. hyp : Formula List
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. 2. M : Formula List
. 3. N : Formula List
. 4. f : Formula
. 5. a : Assignment
. 6. a |= <hyp,M @ (⌈◇⌉f.N)>
. ⊢  a |= <f.hyp,M @ N>
. | by OnHyps [-1;0]
. |    (λi.
. |     UnfoldTopAb i THEN AbReduce i
. |     THEN
. |     Rewrite
. |     (HigherC
. |      (LemmaC
. |       Thm* ∀P:(T→Prop), L,M:T List.
. |            ∃x∈(L @ M).P(x) ⟺ ∃x∈L.P(x) ∨ ∃x∈M.P(x)
. |       {list_exists_append_lemma}))
. |     i
. |     THEN
. |     AbReduce i)
. |
. 6. ∃F∈hyp.a |≠ F ∨ ∃F∈M.a |= F  ∨ a |= ⌈◇⌉f  ∨ ∃F∈N.a |= F
. ⊢  a |≠ f ∨ ∃F∈hyp.a |≠ F ∨ ∃F∈M.a |= F  ∨ ∃F∈N.a |= F
. | by Analyze -1
. |
. |\
. | 6. ∃F∈hyp.a |≠ F
. | ⊢   by Choose [1;2] THEN Trivial
. |
. .\
. . 6. ∃F∈M.a |= F  ∨ a |= ⌈◇⌉f  ∨ ∃F∈N.a |= F
. . ⊢   by Analyze -1
. . |
. . |\
. . | 6. ∃F∈M.a |= F
. . | ⊢   by Choose [2;1] THEN Trivial
. . |
. . .\
. . . 6. a |= ⌈◇⌉f  ∨ ∃F∈N.a |= F
. . . ⊢   by Analyze -1
. . . |
. . . |\
. . . | 6. a |= ⌈◇⌉f
. . . | ⊢   by Choose [1;1]
. . . | |
. . . | ⊢  a |≠ f
. . . |   by BackThru
. . . |      Thm* ∀F:Formula, a:Assignment. a |= ⌈◇⌉F  ⟺ a |≠ F

. . . |      {formula_not_sat_lemma}
. . . |
. . . .\
. . . . 6. ∃F∈N.a |= F
. . . . ⊢   by Choose [2;2] THEN Trivial
END
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