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valuation_wf  THM

⊢  ∀a:Assignment, F:Formula. (F under a)  ∈ ℕ3  by UnivCD
|
1. a : Assignment
2. F : Formula
⊢  (F under a)  ∈ ℕ3  by MoveToConcl 1
|
1. F : Formula
⊢  ∀a:Assignment. (F under a)  ∈ ℕ3
| by FormulaElimination 1 THEN Analyze 0 THEN Reduce 0
|
|\
| 1. Q : Formula→Prop
| 2. ∀F:{F:Formula| Q(F) }, a:Assignment. (F under a)  ∈ ℕ3
| 3. x : Var
| 4. a : Assignment
| ⊢  a(x) ∈ ℕ3  by Auto
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| 1. Q : Formula→Prop
| 2. ∀F:{F:Formula| Q(F) }, a:Assignment. (F under a)  ∈ ℕ3
| 3. x : Formula
| 4. Q(x)  [not for witness]
| 5. a : Assignment
| ⊢  ◇3(x under a)  ∈ ℕ3  by MemberEqCD THEN HypBackchain
|
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| 1. Q : Formula→Prop
| 2. ∀F:{F:Formula| Q(F) }, a:Assignment. (F under a)  ∈ ℕ3
| 3. x1 : {F:Formula| Q(F) }
| 4. x2 : Formula
| 5. Q(x2)  [not for witness]
| 6. a : Assignment
| ⊢  (x1 under a)  ∧3 (x2 under a)  ∈ ℕ3
|   by MemberEqCD THEN HypBackchain
|
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| 1. Q : Formula→Prop
| 2. ∀F:{F:Formula| Q(F) }, a:Assignment. (F under a)  ∈ ℕ3
| 3. x1 : {F:Formula| Q(F) }
| 4. x2 : Formula
| 5. Q(x2)  [not for witness]
| 6. a : Assignment
| ⊢  (x1 under a)  ∨3 (x2 under a)  ∈ ℕ3
|   by MemberEqCD THEN HypBackchain
|
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. 1. Q : Formula→Prop
. 2. ∀F:{F:Formula| Q(F) }, a:Assignment. (F under a)  ∈ ℕ3
. 3. y2 : {F:Formula| Q(F) }
. 4. y3 : Formula
. 5. Q(y3)  [not for witness]
. 6. a : Assignment
. ⊢  (y2 under a)  ⇒3 (y3 under a)  ∈ ℕ3
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.   by MemberEqCD THEN HypBackchain
END
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