

t80_afinsq_2

(TMPLwxbJovZLmmj9vPpUFdL4YrJxGKitQyt)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v5_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_ordinal4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v5_ordinal1 \\ & X0) \wedge (v1_finset_1 X0)))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 \\ & X1) \wedge ((v5_ordinal1 X1) \wedge (v1_finset_1 X1)))) \Rightarrow (\neg(r1_tarski X0 X1) \wedge \\ & (\forall X2.((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge ((v5_ordinal1 \\ & X2) \wedge (v1_finset_1 X2)))) \Rightarrow (k1_ordinal4 X0 X2 \neq X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v5_ordinal1 X0) \wedge ((v1_funct_1 \\ & X0) \wedge (v1_finset_1 X0)))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v5_ordinal1 \\ & X1) \wedge ((v1_funct_1 X1) \wedge (v1_finset_1 X1)))) \Rightarrow (\forall X2.((v1_relat_1 \\ & (k1_ordinal4 X0 X1)) \wedge ((v5_relat_1 (k1_ordinal4 X0 X1) X2) \wedge ((v5_ordinal1 \\ & (k1_ordinal4 X0 X1)) \wedge ((v1_funct_1 (k1_ordinal4 X0 X1)) \wedge (v1_finset_1 \\ & (k1_ordinal4 X0 X1)))))) \Rightarrow (((v1_relat_1 X0) \wedge ((v5_relat_1 X0 X2) \wedge \\ & ((v5_ordinal1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finset_1 X0)))) \wedge ((\\ & v1_relat_1 X1) \wedge ((v5_relat_1 X1 X2) \wedge ((v5_ordinal1 X1) \wedge ((v1_funct_1 \\ & X1) \wedge (v1_finset_1 X1)))))) \end{aligned} \quad (2)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge (\\ & (v5_relat_1 X1 X0) \wedge ((v1_funct_1 X1) \wedge ((v5_ordinal1 X1) \wedge (v1_finset_1 \\ & X1)))) \Rightarrow (\forall X2.((v1_relat_1 X2) \wedge ((v5_relat_1 X2 X0) \wedge (\\ & v1_funct_1 X2) \wedge ((v5_ordinal1 X2) \wedge (v1_finset_1 X2)))) \Rightarrow (\neg(r1_tarski \\ & X1 X2) \wedge (\forall X3.((v1_relat_1 X3) \wedge ((v5_relat_1 X3 X0) \wedge ((v1_funct_1 \\ & X3) \wedge ((v5_ordinal1 X3) \wedge (v1_finset_1 X3)))) \Rightarrow (k1_ordinal4 X1 \\ & X3 \neq X2)))) \end{aligned}$$