

t7_catalg_1

(TMZSAq4728x6JTYVpt4LzUNj4RJTK6KRA9K)

October 27, 2020

Let $v3_catalg_1 : \iota \Rightarrow o$ be given. Let $l1_msualg_1 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $u4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k4_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_catalg_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (k4_tarski X0 X1 = k4_tarski X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1_msualg_1 X0) \Rightarrow ((v3_catalg_1 X0) \Leftrightarrow (\exists X1. (\\ & (v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers k5_numbers) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k5_numbers)))))) \wedge ((\forall X2. \\ & \neg (X2 \in u1_struct_0 X0) \wedge (\forall X3. (m1_subset_1 X3 k5_numbers) \Rightarrow \\ & (\forall X4. ((v1_relat_1 X4) \wedge ((v1_funct_1 X4) \wedge (v1_finseq_1 \\ & X4))) \Rightarrow (\neg (X2 = k4_tarski X3 X4) \wedge ((k3_finseq_1 X4 = k3_funct_2 k5_numbers \\ & k5_numbers X1 X3) \wedge (r1_tarski (k2_zfmisc_1 (k1_tarski X3) (k4_finseq_2 \\ & (k3_funct_2 k5_numbers k5_numbers X1 X3) (k4_catalg_1 X0))) (u1_struct_0 \\ & X0)))))) \wedge (\forall X2. \neg (X2 \in u4_struct_0 X0) \wedge (\forall X3. (m1_subset_1 \\ & X3 k5_numbers) \Rightarrow (\forall X4. ((v1_relat_1 X4) \wedge ((v1_funct_1 X4) \wedge \\ & (v1_finseq_1 X4))) \Rightarrow (\neg (X2 = k4_tarski X3 X4) \wedge ((k3_finseq_1 X4 = \\ & k3_funct_2 k5_numbers k5_numbers X1 X3) \wedge (r1_tarski (k2_zfmisc_1 \\ & (k1_tarski X3) (k4_finseq_2 (k3_funct_2 k5_numbers k5_numbers \\ & X1 X3) (k4_catalg_1 X0))) (u4_struct_0 X0))))))))) \end{aligned} \quad (2)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v3_catalg_1 X0) \wedge (l1_msualg_1 X0)) \Rightarrow (\forall X1. \\ & \forall X2.((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v1_finseq_1 X2))) \Rightarrow \\ & (\forall X3.((v1_relat_1 X3) \wedge ((v1_funct_1 X3) \wedge (v1_finseq_1 \\ & X3)))) \Rightarrow (((k4_tarski X1 X2 \in u1_struct_0 X0) \wedge (k4_tarski X1 X3 \in u1_struct_0 \\ & X0)) \vee ((k4_tarski X1 X2 \in u4_struct_0 X0) \wedge (k4_tarski X1 X3 \in u4_struct_0 \\ & X0))) \Rightarrow (k3_finseq_1 X2 = k3_finseq_1 X3))) \end{aligned}$$