

t34_group_7
(TMTcUqhignaZgcC5Wj53reEZdFykfWbU9vy)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_group_1 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_group_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_group_7 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k9_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k4_group_7 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_group_7 : \iota \Rightarrow o$ be given. Let $v2_group_7 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_group_7 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_1 : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (\forall X2. \\
& ((v1_relat_1 X2) \wedge ((v4_relat_1 X2 X0) \wedge ((v1_funct_1 X2) \wedge (v1_partfun1 \\
& X2 X0)))) \Rightarrow (\forall X3. ((v1_relat_1 X3) \wedge ((v4_relat_1 X3 X0) \wedge (\\
& (v1_funct_1 X3) \wedge ((v1_partfun1 X3 X0) \wedge ((v1_group_7 X3) \wedge ((v2_group_7 \\
& X3 X0) \wedge (v3_group_7 X3 X0)))))) \Rightarrow (\forall X4. (m1_subset_1 X4 (\\
& u1_struct_0 (k2_group_7 X0 X3))) \Rightarrow (((X4 = X1) \wedge (\forall X5. \neg (X5 \in \\
& X0) \wedge (\forall X6. ((\neg v2_struct_0 X6) \wedge ((v2_group_1 X6) \wedge ((v3_group_1 \\
& X6) \wedge (l3_algstr_0 X6)))) \Rightarrow (\forall X7. (m1_subset_1 X7 (u1_struct_0 \\
& X6)) \Rightarrow (\neg (X6 = k1_funct_1 X3 X5) \wedge ((k1_funct_1 X2 X5 = k2_group_1 X6 \\
& X7) \wedge (X7 = k1_funct_1 X1 X5)))))) \Rightarrow (X2 = k2_group_1 (k2_group_7 \\
& X0 X3) X4))))))
\end{aligned} \tag{1}$$

Assume the following.

$$(k2_finseq_1 np_1 = k1_tarski np_1) \wedge (k2_finseq_1 np_2 = k2_tarski np_1 np_2) \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 \\ X0))) \Rightarrow ((v1_relat_1 (k9_finseq_1 X0)) \wedge ((v4_relat_1 (k9_finseq_1 \\ X0) (k1_tarski np_1)) \wedge ((v1_funct_1 (k9_finseq_1 X0)) \wedge ((v1_partfun1 \\ (k9_finseq_1 X0) (k1_tarski np_1)) \wedge ((v1_group_7 (k9_finseq_1 \\ X0)) \wedge (v3_group_7 (k9_finseq_1 X0) (k1_tarski np_1))))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge (l3_algstr_0 \\ X0))) \Rightarrow ((v1_relat_1 (k9_finseq_1 X0)) \wedge ((v4_relat_1 (k9_finseq_1 \\ X0) (k1_tarski np_1)) \wedge ((v1_funct_1 (k9_finseq_1 X0)) \wedge ((v1_partfun1 \\ (k9_finseq_1 X0) (k1_tarski np_1)) \wedge ((v1_group_7 (k9_finseq_1 \\ X0)) \wedge (v2_group_7 (k9_finseq_1 X0) (k1_tarski np_1))))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l3_algstr_0 X0)) \Rightarrow ((v1_relat_1 \\ (k9_finseq_1 X0)) \wedge ((v4_relat_1 (k9_finseq_1 X0) (k1_tarski np_1)) \wedge \\ ((v1_funct_1 (k9_finseq_1 X0)) \wedge ((v1_partfun1 (k9_finseq_1 X0) \\ (k1_tarski np_1)) \wedge (v1_group_7 (k9_finseq_1 X0)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski X0 X0 \quad (6)$$

Assume the following.

$$\forall X0. k9_finseq_1 X0 = k5_finseq_1 X0 \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l3_algstr_0 X0)) \wedge \\ (m1_subset_1 X1 (u1_struct_0 X0))) \Rightarrow (k4_group_7 X0 X1 = k5_finseq_1 \\ X1) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (\\ k1_relset_1 X0 X1 = k9_xtuple_0 X1) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. v1_relat_1 (k1_tarski (k4_tarski X0 X1)) \quad (10)$$

Assume the following.

$$\forall X0. \forall X1. v1_funct_1 (k1_tarski (k4_tarski X0 X1)) \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l3_algstr_0 X0)) \wedge \\ & (m1_subset_1 X1 (u1_struct_0 X0))) \Rightarrow (m1_subset_1 (k4_group_7 \\ & X0 X1) (u1_struct_0 (k2_group_7 (k1_tarski np_1) (k9_finseq_1 \\ & X0)))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge \\ & ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge (m1_subset_1 X1 (u1_struct_0 \\ & X0))) \Rightarrow (m1_subset_1 (k2_group_1 X0 X1) (u1_struct_0 X0)) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((X1 = \\ & k9_finseq_1 X0) \Leftrightarrow ((k9_xtuple_0 X1 = k2_finseq_1 np_1) \wedge (k1_funct_1 \\ & X1 np_1 = X0))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0. \forall X1. k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \quad (15)$$

Assume the following.

$$\forall X0. k5_finseq_1 X0 = k1_tarski (k4_tarski np_1 X0) \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (\\ & (v1_partfun1 X1 X0) \Leftrightarrow (k1_relset_1 X0 X1 = X0)) \end{aligned} \quad (17)$$

Assume the following.

$$\forall X0. \forall X1. (X1 = k1_tarski X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (18)$$

Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 X1) \Rightarrow ((v4_relat_1 X1 X0) \Leftrightarrow (r1_tarski (k9_xtuple_0 X1) X0)) \quad (19)$$

Assume the following.

$$\forall X0. \forall X1. k2_tarski X0 X1 = k2_tarski X1 X0 \quad (20)$$

Theorem 1

$$\begin{aligned} & \forall X0. (((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (k2_group_1 (k2_group_7 (k1_tarski np_1) (k9_finseq_1 \\ & X0)) (k4_group_7 X0 X1) = k4_group_7 X0 (k2_group_1 X0 X1))) \end{aligned}$$