

t37_group_7

(TMSZ17r2hpQ3EnyEXjGfA2LNPfRbysEaADV)

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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 $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_group_7 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_group_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_group_7 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v15_algstr_0 : \iota \Rightarrow o$ be given. Let $v1_monoid_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l3_algstr_0 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 \\ & (u1_struct_0 X0)) \Rightarrow (k6_algstr_0 (k2_group_7 (k1_tarski np_1) \\ & (k9_finseq_1 X0)) (k4_group_7 X0 X1) (k4_group_7 X0 X2) = k4_group_7 \\ & X0 (k6_algstr_0 X0 X1 X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. k9_finseq_1 X0 = k5_finseq_1 X0 \tag{2}$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l3_algstr_0 X0)) \Rightarrow ((v1_partfun1 (k5_finseq_1 X0) (k1_tarski np_1)) \wedge (v1_group_7 (k5_finseq_1 X0))) \tag{3}$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l3_algstr_0 X0)) \Rightarrow (v4_relat_1 (k5_finseq_1 X0) (k1_tarski np_1)) \tag{4}$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_relat_1 X1)\wedge((v4_relat_1 X1 X0)\wedge \\ (v1_funct_1 X1)\wedge((v1_partfun1 X1 X0)\wedge(v1_group_7 X1))))\Rightarrow((\\ \neg v2_struct_0 (k2_group_7 X0 X1))\wedge((v15_algstr_0 (k2_group_7 \\ X0 X1))\wedge(v1_monoid_0 (k2_group_7 X0 X1)))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(v1_relat_1 (k9_finseq_1 X0))\wedge(v1_funct_1 (k9_finseq_1 X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((l3_algstr_0 X0)\wedge((m1_subset_1 \\ X1 (u1_struct_0 X0))\wedge(m1_subset_1 X2 (u1_struct_0 X0))))\Rightarrow(m1_subset_1 \\ (k6_algstr_0 X0 X1 X2) (u1_struct_0 X0)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_relat_1 X1)\wedge((v4_relat_1 X1 X0)\wedge \\ (v1_funct_1 X1)\wedge((v1_partfun1 X1 X0)\wedge(v1_group_7 X1))))\Rightarrow((\\ v15_algstr_0 (k2_group_7 X0 X1))\wedge(l3_algstr_0 (k2_group_7 X0 \\ X1))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0)\wedge(l3_algstr_0 X0))\Rightarrow(\forall X1. \\ ((\neg v2_struct_0 X1)\wedge(l3_algstr_0 X1))\Rightarrow(\forall X2.((v1_funct_1 \\ X2)\wedge((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1))\wedge(m1_subset_1 \\ X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1))))))\Rightarrow \\ ((v1_group_6 X2 X0 X1)\Leftrightarrow(\forall X3.(m1_subset_1 X3 (u1_struct_0 \\ X0))\Rightarrow(\forall X4.(m1_subset_1 X4 (u1_struct_0 X0))\Rightarrow(k3_funct_2 \\ (u1_struct_0 X0) (u1_struct_0 X1) X2 (k6_algstr_0 X0 X3 X4) = k6_algstr_0 \\ X1 (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 X1) X2 X3) (k3_funct_2 \\ (u1_struct_0 X0) (u1_struct_0 X1) X2 X4))))))) \end{aligned} \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 \\ & X1 (u1_struct_0 X0) (u1_struct_0 (k2_group_7 (k1_tarski_np_1) \\ & (k9_finseq_1 X0)))) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (u1_struct_0 X0) (u1_struct_0 (k2_group_7 (k1_tarski_np_1) (\\ & k9_finseq_1 X0)))))))) \Rightarrow ((\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ & X0)) \Rightarrow (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 (k2_group_7 (\\ & k1_tarski_np_1) (k9_finseq_1 X0))) X1 X2 = k4_group_7 X0 X2)) \Rightarrow (\\ & (v1_funct_1 X1) \wedge ((v1_funct_2 X1 (u1_struct_0 X0) (u1_struct_0 \\ & (k2_group_7 (k1_tarski_np_1) (k9_finseq_1 X0)))) \wedge ((v1_group_6 \\ & X1 X0 (k2_group_7 (k1_tarski_np_1) (k9_finseq_1 X0))) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 (k2_group_7 \\ & (k1_tarski_np_1) (k9_finseq_1 X0)))))))))) \end{aligned}$$