

t16_group_4 (TMMN- WKKqZGuGj2fKuif2j1FFscYKoaеURrX)

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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 $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v5_group_1 : \iota \Rightarrow o$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k3_group_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v2_binop_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_binop_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_setwiseo : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_finsop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2_algstr_0 : \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_group_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m2_finseq_1 X1 X0) \Rightarrow \\
& \quad (\forall X2. (m2_finseq_1 X2 X0) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge \\
& ((v1_funct_2 X3 (k2_zfmisc_1 X0 X0) X0) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) X0)))))) \Rightarrow (((v2_binop_1 X3 X0) \wedge \\
& ((v1_binop_1 X3 X0) \wedge ((v2_funct_1 X1) \wedge ((v2_funct_1 X2) \wedge (k10_xtuple_0 \\
& X1 = k10_xtuple_0 X2)))))) \Rightarrow (((\neg v1_setwiseo X3 X0) \wedge (\neg r1_xxreal_0 \\
& np_1 (k3_finseq_1 X1))) \vee (k1_finsop_1 X0 X1 X3 = k1_finsop_1 X0 \\
& \quad X2 X3))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\
& X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge \\
& ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge (l3_algstr_0 X0)))))) \Leftrightarrow (v1_binop_1 \\
& \quad (u2_algstr_0 X0) (u1_struct_0 X0))
\end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \tag{3}$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v1_group_1 X0) \wedge (l3_algstr_0 X0))) \Rightarrow ((v1_funct_1 (u2_algstr_0 X0)) \wedge ((v1_funct_2 (u2_algstr_0 X0) (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)) (u1_struct_0 X0)) \wedge (v1_setwiseo (u2_algstr_0 X0) (u1_struct_0 X0)))) \quad (4)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0))) \Rightarrow ((v1_funct_1 (u2_algstr_0 X0)) \wedge ((v1_funct_2 (u2_algstr_0 X0) (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)) (u1_struct_0 X0)) \wedge (v2_binop_1 (u2_algstr_0 X0) (u1_struct_0 X0)))) \quad (5)$$

Assume the following.

$$\forall X0.(l3_algstr_0 X0) \Rightarrow ((v1_funct_1 (u2_algstr_0 X0)) \wedge ((v1_funct_2 (u2_algstr_0 X0) (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)) (u1_struct_0 X0)) \wedge (m1_subset_1 (u2_algstr_0 X0) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)) (u1_struct_0 X0)))))) \quad (6)$$

Assume the following.

$$\forall X0.(l3_algstr_0 X0) \Rightarrow (l1_struct_0 X0) \quad (7)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l3_algstr_0 X0)) \Rightarrow (\forall X1.(m2_finseq_1 X1 (u1_struct_0 X0)) \Rightarrow (k3_group_4 X0 X1 = k1_finsop_1 (u1_struct_0 X0) X1 (u2_algstr_0 X0))) \quad (8)$$

Assume the following.

$$\forall X0.(l3_algstr_0 X0) \Rightarrow ((v2_group_1 X0) \Rightarrow (v1_group_1 X0)) \quad (9)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m2_finseq_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m2_finseq_1 X2 (u1_struct_0 X0)) \Rightarrow (((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge (l3_algstr_0 X0)))))) \wedge ((v2_funct_1 X1) \wedge ((v2_funct_1 X2) \wedge (k10_xtuple_0 X1 = k10_xtuple_0 X2)))) \Rightarrow (k3_group_4 X0 X1 = k3_group_4 X0 X2))))$$