

t25_group_6

(TMV99mZPVCXbJh8UCcEca2WkCGhs9xNd7Ta)

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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 $v1_group.3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_group.2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_group.6 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13_group.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_group.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc.1 : \iota \Rightarrow \iota$ be given. Let $k11_group.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_group.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_group.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_group.2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_group.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_group.4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k14_group.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_group.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_group.1 : \iota \Rightarrow \iota$ be given. Let $k6_group.6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_algstr.0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v15_algstr.0 : \iota \Rightarrow o$ be given. Let $k6_domain.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct.0 X0) \wedge ((v2_group.1 X0) \wedge ((v3_group.1 \\ & X0) \wedge (l3_algstr.0 X0)))) \Rightarrow (\forall X1.(m1_subset.1 X1 (u1_struct.0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset.1 X2 (k1_zfmisc.1 (u1_struct.0 X0))) \Rightarrow \quad (1) \\ & (\forall X3.(m1_group.2 X3 X0) \Rightarrow (k11_group.2 X0 X3 (k5_group.2 \\ & X0 X1 X2) = k2_group.2 X0 X2 (k13_group.2 X0 X3 X1)))))) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct.0 X0) \wedge ((v2_group.1 X0) \wedge ((v3_group.1 \\ & X0) \wedge (l3_algstr.0 X0)))) \Rightarrow (\forall X1.(m1_group.2 X1 X0) \Rightarrow (k2_group.2 \quad (2) \\ & X0 (k8_group.2 X0 X1) (k8_group.2 X0 X1) = k8_group.2 X0 X1)) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct.0 X0) \wedge ((v2_group.1 X0) \wedge ((v3_group.1 \\ & X0) \wedge (l3_algstr.0 X0)))) \Rightarrow (\forall X1.(m1_group.2 X1 X0) \Rightarrow (\forall X2. \\ & (m1_subset.1 X2 (u1_struct.0 X0)) \Rightarrow ((k11_group.2 X0 X1 (k13_group.2 \\ & X0 X1 X2) = k13_group.2 X0 X1 X2) \wedge ((k4_group.2 X0 X2 (k7_group.4 X0 \\ & X1 X1) = k13_group.2 X0 X1 X2) \wedge ((k5_group.2 X0 X2 (k7_group.4 X0 X1 \\ & X1) = k14_group.2 X0 X1 X2) \wedge (k12_group.2 X0 X1 (k14_group.2 X0 X1 \\ & X2) = k14_group.2 X0 X1 X2)))))) \quad (3) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge (l3_algstr_0 \\ & X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0))) \Rightarrow ((k4_group_2 X0 (k1_group_1 X0) X1 = X1) \wedge (k5_group_2 X0 (\\ & k1_group_1 X0) X1 = X1))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.((v1_group_3 X1 X0) \wedge (m1_group_2 \\ & X1 X0)) \Rightarrow (k1_group_1 (k5_group_6 X0 X1) = k8_group_2 X0 X1)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.((v1_group_3 X2 X0) \wedge (m1_group_2 X2 X0)) \Rightarrow ((m1_subset_1 \\ & (k14_group_2 X0 X2 X1) (u1_struct_0 (k5_group_6 X0 X2))) \wedge ((m1_subset_1 \\ & (k13_group_2 X0 X2 X1) (u1_struct_0 (k5_group_6 X0 X2))) \wedge (m1_subset_1 \\ & (k8_group_2 X0 X2) (u1_struct_0 (k5_group_6 X0 X2)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.((v1_group_3 X1 X0) \wedge (m1_group_2 \\ & X1 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k5_group_6 \\ & X0 X1))) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k5_group_6 \\ & X0 X1))) \Rightarrow (k2_group_2 X0 (k6_group_6 X0 X1 X2) (k6_group_6 X0 X1 X3) = \\ & k6_algstr_0 (k5_group_6 X0 X1) X2 X3)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow (((v1_group_3 \\ & X1 X0) \wedge (m1_group_2 X1 X0)) \Leftrightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ & X0)) \Rightarrow (k13_group_2 X0 X1 X2 = k14_group_2 X0 X1 X2)))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ & (\forall X3.(m1_group_2 X3 X0) \Rightarrow (k2_group_2 X0 (k13_group_2 X0 \\ & X3 X1) X2 = k4_group_2 X0 X1 (k12_group_2 X0 X3 X2)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (m1_group_2 X3 X0) \Rightarrow (k5_group_2 X0 X2 (k13_group_2 X0 X3 X1) = k4_group_2 \\ & X0 X1 (k14_group_2 X0 X3 X2)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (m1_group_2 X3 X0) \Rightarrow (k13_group_2 X0 X3 (k6_algstr_0 X0 X1 X2) = k4_group_2 \\ & X0 X1 (k13_group_2 X0 X3 X2)))))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge \\ & ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge ((v1_group_3 X1 X0) \wedge (m1_group_2 \\ & X1 X0))) \Rightarrow ((v2_group_1 (k5_group_6 X0 X1)) \wedge (v3_group_1 (k5_group_6 \\ & X0 X1))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge \\ & ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge ((v1_group_3 X1 X0) \wedge (m1_group_2 \\ & X1 X0))) \Rightarrow ((\neg v2_struct_0 (k5_group_6 X0 X1)) \wedge (v15_algstr_0 (k5_group_6 \\ & X0 X1))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge \\ & ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge (m1_group_2 X1 X0)) \Rightarrow (m1_subset_1 \\ & (k8_group_2 X0 X1) (k1_zfmisc_1 (u1_struct_0 X0))) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v2_group_1 \\ & X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge ((v1_group_3 X1 X0) \wedge \\ & (m1_group_2 X1 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 (k5_group_6 \\ & X0 X1)))) \Rightarrow (m1_subset_1 (k6_group_6 X0 X1 X2) (k1_zfmisc_1 (u1_struct_0 \\ & X0))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge \\ & ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge ((v1_group_3 X1 X0) \wedge (m1_group_2 \\ & X1 X0))) \Rightarrow (l3_algstr_0 (k5_group_6 X0 X1)) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge \\ & ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge (m1_subset_1 X1 (u1_struct_0 \\ & X0))) \Rightarrow (m1_subset_1 (k2_group_1 X0 X1) (u1_struct_0 X0)) \end{aligned} \quad (17)$$

Assume the following.

$$\forall X0. (l3_algstr_0 X0) \Rightarrow (m1_subset_1 (k1_group_1 X0) (u1_struct_0 X0)) \quad (18)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1. ((v1_group_3 X1 X0) \wedge (m1_group_2 \\ & X1 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 (k5_group_6 \\ & X0 X1))) \Rightarrow (k6_group_6 X0 X1 X2 = X2))) \end{aligned} \quad (19)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((X2 = k2_group_1 \\ & X0 X1) \Leftrightarrow ((k6_algstr_0 X0 X1 X2 = k1_group_1 X0) \wedge (k6_algstr_0 X0 X2 \\ & X1 = k1_group_1 X0)))))) \end{aligned} \quad (20)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l3_algstr_0 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 \\ & (k1_zfmisc_1 (u1_struct_0 X0)) \Rightarrow (k5_group_2 X0 X1 X2 = k2_group_2 \\ & X0 X2 (k6_domain_1 (u1_struct_0 X0) X1)))))) \end{aligned} \quad (21)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1. (m1_group_2 X1 X0) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k14_group_2 X0 X1 X2 = k5_group_2 \\ & X0 X2 (k8_group_2 X0 X1)))))) \end{aligned} \quad (22)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1. (m1_group_2 X1 X0) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k13_group_2 X0 X1 X2 = k4_group_2 \\ & X0 X2 (k8_group_2 X0 X1)))))) \end{aligned} \quad (23)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow (\forall X2. \\ (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (k11_group_2 \\ X0 X1 X2 = k2_group_2 X0 X2 (k8_group_2 X0 X1)))) \end{aligned} \quad (24)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (\forall X2.((v1_group_3 X2 X0) \wedge (m1_group_2 X2 X0)) \Rightarrow (\forall X3. \\ (m1_subset_1 X3 (u1_struct_0 (k5_group_6 X0 X2))) \Rightarrow ((X3 = k13_group_2 \\ X0 X2 X1) \Rightarrow (k2_group_1 (k5_group_6 X0 X2) X3 = k13_group_2 X0 X2 (k2_group_1 \\ X0 X1)))))) \end{aligned}$$