

t45_group_4 (TMNHv- moZxVUpNG7tJ21bKEWFUXuUeg4LHd6)

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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 $m1_group_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k11_group_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13_group_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k2_group_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_group_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_group_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow (\forall X2. \\ & (m1_group_2 X2 X0) \Rightarrow ((k7_group_4 X0 X1 X2 = k2_group_2 X0 (k8_group_2 \\ & X0 X1) (k8_group_2 X0 X2)) \wedge ((k7_group_4 X0 X1 X2 = k12_group_2 X0 \\ & X1 (k8_group_2 X0 X2)) \wedge (k7_group_4 X0 X1 X2 = k11_group_2 X0 X2 (k8_group_2 \\ & X0 X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow \\ & (\forall X3.(m1_group_2 X3 X0) \Rightarrow (k2_group_2 X0 (k13_group_2 X0 \\ & X3 X1) X2 = k4_group_2 X0 X1 (k12_group_2 X0 X3 X2)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge \\ & ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge (m1_group_2 X1 X0)) \Rightarrow (m1_subset_1 \\ & (k8_group_2 X0 X1) (k1_zfmisc_1 (u1_struct_0 X0))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge ((v2_group_1 \\ & X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge ((m1_group_2 X1 X0) \wedge \\ & (m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (m1_subset_1 (k13_group_2 \\ & X0 X1 X2) (k1_zfmisc_1 (u1_struct_0 X0))) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow (\forall X2. \\ (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (k11_group_2 \\ X0 X1 X2 = k2_group_2 X0 X2 (k8_group_2 X0 X1)))) \end{aligned} \quad (5)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (\forall X2.(m1_group_2 X2 X0) \Rightarrow (\forall X3.(m1_group_2 \\ X3 X0) \Rightarrow (k11_group_2 X0 X3 (k13_group_2 X0 X2 X1) = k4_group_2 X0 X1 \\ (k7_group_4 X0 X2 X3)))))) \end{aligned}$$