

t24_grnilp_1 (TMKxXpd- kPnR7igtXaEp27TAzqaMn6qNvDVx)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v15_algstr_0 : \iota \Rightarrow o$ 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 $v1_group_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $m1_group_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_group_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_group_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_grsolv_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13_group_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k14_group_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge (l3_algstr_0 \\
 & X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
 & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_group_2 X3 \\
 & X0) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X3)) \Rightarrow (\forall X5. \\
 & (m1_subset_1 X5 (u1_struct_0 X3)) \Rightarrow (((X4 = X1) \wedge (X5 = X2)) \Rightarrow (k6_algstr_0 \\
 & X3 X4 X5 = k6_algstr_0 X0 X1 X2))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge (l3_algstr_0 \\
 & X0))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow (\forall X2.(m1_subset_1 \\
 & X2 (u1_struct_0 X1)) \Rightarrow (m1_subset_1 X2 (u1_struct_0 X0))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\
 & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow (\forall X2. \\
 & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_group_6 X3 \\
 & X0 X1) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X1)) \Rightarrow ((X4 = X2) \Rightarrow \\
 & ((k13_group_2 X1 X3 X4 = k13_group_2 X0 X3 X2) \wedge (k14_group_2 X1 X3 \\
 & X4 = k14_group_2 X0 X3 X2))))))
 \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge (l3_algstr_0 \\ X0))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow ((\neg v2_struct_0 X1) \wedge ((v2_group_1 \\ X1) \wedge (l3_algstr_0 X1)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((l3_algstr_0 X0) \wedge ((m1_subset_1 \\ X1 (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (m1_subset_1 \\ (k6_algstr_0 X0 X1 X2) (u1_struct_0 X0)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge ((v2_group_1 \\ X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge (((\neg v2_struct_0 X1) \wedge \\ ((v2_group_1 X1) \wedge ((v3_group_1 X1) \wedge (l3_algstr_0 X1)))) \wedge ((v1_funct_1 \\ X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge ((v1_group_6 \\ X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ X0) (u1_struct_0 X1)))))))))) \Rightarrow ((v15_algstr_0 (k10_group_6 X0 \\ X1 X2)) \wedge (m1_group_2 (k10_group_6 X0 X1 X2) X1)) \end{aligned} \quad (6)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v15_algstr_0 X0) \wedge ((v2_group_1 \\ X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))))) \Rightarrow (\forall X1.((\neg v2_struct_0 \\ X1) \wedge ((v15_algstr_0 X1) \wedge ((v2_group_1 X1) \wedge ((v3_group_1 X1) \wedge \\ (l3_algstr_0 X1)))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 \\ X2 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge ((v1_group_6 X2 X0 X1) \wedge \\ (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 \\ X1)))))))) \Rightarrow (\forall X3.((v15_algstr_0 X3) \wedge (m1_group_2 X3 X0)) \Rightarrow \\ (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (\forall X5.(m1_subset_1 \\ X5 (u1_struct_0 X0)) \Rightarrow (\forall X6.(m1_group_6 X6 X1 (k10_group_6 \\ X0 X1 X2)) \Rightarrow (\forall X7.(m1_subset_1 X7 (u1_struct_0 (k10_group_6 \\ X0 X1 X2)) \Rightarrow (\forall X8.(m1_subset_1 X8 (u1_struct_0 (k10_group_6 \\ X0 X1 X2)) \Rightarrow (((X7 = k3_funct_2 (u1_struct_0 X0) (u1_struct_0 X1) \\ X2 X4) \wedge ((X8 = k3_funct_2 (u1_struct_0 X0) (u1_struct_0 X1) X2 X5) \wedge \\ (X6 = k2_grsolv_1 X0 X1 X2 X3)) \Rightarrow (k13_group_2 (k10_group_6 X0 X1 \\ X2) X6 (k6_algstr_0 (k10_group_6 X0 X1 X2) X7 X8) = k13_group_2 X1 \\ (k2_grsolv_1 X0 X1 X2 X3) (k6_algstr_0 X1 (k3_funct_2 (u1_struct_0 \\ X0) (u1_struct_0 X1) X2 X4) (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 \\ X1) X2 X5)))))))))))))) \end{aligned}$$