

t30_group_4 (TMRdQA- cLAz3y8XhEJCjbFvYnC1kAmqZEy5F)

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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 $r1_group_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_group_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_subset_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k6_group_2 : \iota \Rightarrow \iota$ be given. Let $m1_group_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v15_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow (m1_group_2 \\ (k6_group_2 X0) X1)) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.r1_tarski k1_xboole_0 X0 \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge ((v2_group_1 \\ X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge (((v15_algstr_0 X1) \wedge \\ (m1_group_2 X1 X0) \wedge ((v15_algstr_0 X2) \wedge (m1_group_2 X2 X0)))) \Rightarrow \\ ((r1_group_2 X0 X1 X2) \Leftrightarrow (X1 = X2)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ X0) \wedge (l3_algstr_0 X0)))) \Rightarrow ((v15_algstr_0 (k6_group_2 X0)) \wedge (m1_group_2 \\ (k6_group_2 X0) X0)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.m1_subset_1 (k1_subset_1 X0) (k1_zfmisc_1 X0) \quad (5)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\
& X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\
& (u1_struct_0 X0))) \Rightarrow (\forall X2.((v15_algstr_0 X2) \wedge (m1_group_2 \\
& X2 X0)) \Rightarrow ((X2 = k5_group_4 X0 X1) \Leftrightarrow ((r1_tarski X1 (u1_struct_0 X2)) \wedge \\
& (\forall X3.((v15_algstr_0 X3) \wedge (m1_group_2 X3 X0)) \Rightarrow ((r1_tarski \\
& X1 (u1_struct_0 X3)) \Rightarrow (m1_group_2 X2 X3))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\forall X0.k1_subset_1 X0 = k1_xboole_0 \tag{7}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\
& X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (r1_group_2 X0 (k5_group_4 X0 (k1_subset_1 \\
& (u1_struct_0 X0))) (k6_group_2 X0))
\end{aligned}$$