

l101_group_2

(TMEr9AATgBScCCpwhP1Bwf6khSrQxbYnLf1)

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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 $m1_group_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_group_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_group_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v15_algstr_0 : \iota \Rightarrow o$ be given. Let $r1_group_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\
& X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow (\forall X2. \\
& (m1_group_2 X2 X0) \Rightarrow ((\forall X3.(m1_group_2 X3 X0) \Rightarrow ((X3 = k9_group_2 \\
& X0 X1 X2) \Rightarrow (u1_struct_0 X3 = k3_xboole_0 (u1_struct_0 X1) (u1_struct_0 \\
& X2)))) \wedge (\forall X3.((v15_algstr_0 X3) \wedge (m1_group_2 X3 X0)) \Rightarrow (\\
& (u1_struct_0 X3 = k3_xboole_0 (u1_struct_0 X1) (u1_struct_0 X2)) \Rightarrow \\
& (r1_group_2 X0 X3 (k9_group_2 X0 X1 X2))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\
& X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.(m1_group_2 X1 X0) \Rightarrow (\forall X2. \\
& (m1_group_2 X2 X0) \Rightarrow ((r1_tarski (u1_struct_0 X1) (u1_struct_0 \\
& X2)) \Rightarrow (m1_group_2 X1 X2))))
\end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski (k3_xboole_0 X0 X1) X0 \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v2_group_1 \\
& X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge ((m1_group_2 X1 X0) \wedge \\
& (m1_group_2 X2 X0))) \Rightarrow (k10_group_2 X0 X1 X2 = k9_group_2 X0 X1 X2)
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v2_group_1 \\ & X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \wedge ((m1_group_2 X1 X0) \wedge \\ & (m1_group_2 X2 X0))) \Rightarrow ((v15_algstr_0 (k10_group_2 X0 X1 X2)) \wedge (\\ & m1_group_2 (k10_group_2 X0 X1 X2) X0)) \end{aligned} \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0. (((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1. (m1_group_2 X1 X0) \Rightarrow (\forall X2. \\ & (m1_group_2 X2 X0) \Rightarrow (m1_group_2 (k10_group_2 X0 X1 X2) X1)))) \end{aligned}$$