

t90_zmodul01

(TMPHAyaAagpBCPibncdrt6yMg6GBypxqxbq)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $v2_zmodul01 : \iota \Rightarrow o$ be given. Let $v3_zmodul01 : \iota \Rightarrow o$ be given. Let $v4_zmodul01 : \iota \Rightarrow o$ be given. Let $v5_zmodul01 : \iota \Rightarrow o$ be given. Let $l1_zmodul01 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_zmodul01 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_zmodul01 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_struct_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_zmodul01 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
 & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_zmodul01 X0) \wedge \\
 & ((v3_zmodul01 X0) \wedge ((v4_zmodul01 X0) \wedge ((v5_zmodul01 X0) \wedge (l1_zmodul01 \\
 & X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\
 & (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_zmodul01 \\
 & X3 X0) \Rightarrow ((\exists X4.(m1_subset_1 X4 (u1_struct_0 X0)) \wedge ((X1 \in k5_zmodul01 \\
 & X0 X4 X3) \wedge (X2 \in k5_zmodul01 X0 X4 X3))) \Leftrightarrow (r1_struct_0 X3 (k5_algstr_0 \\
 & X0 X1 X2))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge \\
 & ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_zmodul01 \\
 & X0) \wedge ((v3_zmodul01 X0) \wedge ((v4_zmodul01 X0) \wedge ((v5_zmodul01 X0) \wedge \\
 & (l1_zmodul01 X0)))))))))) \wedge (m1_zmodul01 X1 X0)) \Rightarrow (\forall X2. \\
 & (m2_zmodul01 X2 X0 X1) \Rightarrow (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\
 & X0))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (v13_algstr_0 \\
& X0) \wedge ((v2_rlvect_1 X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge \\
& ((v2_zmodul01 X0) \wedge (v3_zmodul01 X0) \wedge (v4_zmodul01 X0) \wedge (v5_zmodul01 \\
& X0) \wedge (l1_zmodul01 X0)))))) \wedge ((m1_subset_1 X1 (u1_struct_0 \\
& X0)) \wedge (m1_zmodul01 X2 X0)) \Rightarrow (m1_subset_1 (k5_zmodul01 X0 X1 X2) \\
& (k1_zfmisc_1 (u1_struct_0 X0)))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_zmodul01 X0) \wedge \\
& ((v3_zmodul01 X0) \wedge (v4_zmodul01 X0) \wedge (v5_zmodul01 X0) \wedge (l1_zmodul01 \\
& X0)))))))) \Rightarrow (\forall X1. (m1_zmodul01 X1 X0) \Rightarrow (\forall X2. (m1_subset_1 \\
& X2 (k1_zfmisc_1 (u1_struct_0 X0)) \Rightarrow ((m2_zmodul01 X2 X0 X1) \Leftrightarrow (\exists X3. \\
& (m1_subset_1 X3 (u1_struct_0 X0)) \wedge (X2 = k5_zmodul01 X0 X3 X1))))))
\end{aligned} \tag{4}$$

Theorem 1

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v2_zmodul01 X0) \wedge \\
& ((v3_zmodul01 X0) \wedge (v4_zmodul01 X0) \wedge (v5_zmodul01 X0) \wedge (l1_zmodul01 \\
& X0)))))))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\
& (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_zmodul01 \\
& X3 X0) \Rightarrow ((\exists X4. (m2_zmodul01 X4 X0 X3) \wedge ((X1 \in X4) \wedge (X2 \in X4)) \Leftrightarrow \\
& (r1_struct_0 X3 (k5_algstr_0 X0 X1 X2))))))
\end{aligned}$$