

t25_reaset3

(TMN3YwA1xeSEbW39q5TT3A39M46W6JJQT62)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v6_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v33_algstr_0 : \iota \Rightarrow o$ 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 $v3_group_1 : \iota \Rightarrow o$ be given. Let $v5_group_1 : \iota \Rightarrow o$ be given. Let $v4_vectsp_1 : \iota \Rightarrow o$ be given. Let $v5_vectsp_1 : \iota \Rightarrow o$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_realset3 : \iota \Rightarrow \iota$ be given. Let $k5_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_realset2 : \iota \Rightarrow \iota$ be given. Let $k1_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_realset2 : \iota \Rightarrow \iota$ 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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
 & X0) \wedge ((v33_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge \\
 & ((v4_rlvect_1 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 \\
 & X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
 & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 \\
 & (u1_struct_0 X0)) \Rightarrow (\forall X3. (m2_subset_1 X3 (u1_struct_0 X0) \\
 & (k8_struct_0 X0)) \Rightarrow (\forall X4. (m2_subset_1 X4 (u1_struct_0 X0) \\
 & (k8_struct_0 X0)) \Rightarrow ((k1_binop_1 (k4_realset2 X0) X1 (k3_funct_2 \\
 & (k8_struct_0 X0) (k8_struct_0 X0) (k5_realset2 X0) X3) = k1_binop_1 \\
 & (k4_realset2 X0) X2 (k3_funct_2 (k8_struct_0 X0) (k8_struct_0 \\
 & X0) (k5_realset2 X0) X4) \Leftrightarrow (k5_binop_1 (u1_struct_0 X0) (k4_realset2 \\
 & X0) X1 X4 = k5_binop_1 (u1_struct_0 X0) (k4_realset2 X0) X3 X2))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v33_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge \\
& ((v4_rlvect_1 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 \\
& X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow ((v1_funct_1 \\
& (k2_realset3 X0) \wedge ((v1_funct_2 (k2_realset3 X0) (k2_zfmisc_1 \\
& (u1_struct_0 X0) (k8_struct_0 X0)) (u1_struct_0 X0)) \wedge (m1_subset_1 \\
& (k2_realset3 X0) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& X0) (k8_struct_0 X0)) (u1_struct_0 X0))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v33_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge \\
& ((v4_rlvect_1 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 \\
& X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
& ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (k2_zfmisc_1 (u1_struct_0 X0) \\
& (k8_struct_0 X0)) (u1_struct_0 X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (k8_struct_0 X0)) \\
& (u1_struct_0 X0)))))) \Rightarrow ((X1 = k2_realset3 X0) \Leftrightarrow (\forall X2.(m1_subset_1 \\
& X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m2_subset_1 X3 (u1_struct_0 \\
& X0) (k8_struct_0 X0)) \Rightarrow (k2_binop_1 (u1_struct_0 X0) (k8_struct_0 \\
& X0) (u1_struct_0 X0) X1 X2 X3 = k1_binop_1 (k4_realset2 X0) X2 (k3_funct_2 \\
& (k8_struct_0 X0) (k8_struct_0 X0) (k5_realset2 X0) X3))))))
\end{aligned} \tag{3}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v33_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge \\
& ((v4_rlvect_1 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 \\
& X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
& (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\
& (u1_struct_0 X0)) \Rightarrow (\forall X3.(m2_subset_1 X3 (u1_struct_0 X0) \\
& (k8_struct_0 X0)) \Rightarrow (\forall X4.(m2_subset_1 X4 (u1_struct_0 X0) \\
& (k8_struct_0 X0)) \Rightarrow ((k2_binop_1 (u1_struct_0 X0) (k8_struct_0 \\
& X0) (u1_struct_0 X0) (k2_realset3 X0) X1 X3 = k2_binop_1 (u1_struct_0 \\
& X0) (k8_struct_0 X0) (u1_struct_0 X0) (k2_realset3 X0) X2 X4) \Leftrightarrow (\\
& k5_binop_1 (u1_struct_0 X0) (k4_realset2 X0) X1 X4 = k5_binop_1 \\
& (u1_struct_0 X0) (k4_realset2 X0) X3 X2))))))
\end{aligned}$$