

t1_parsp_1

(TMUH3xBGph7L8s4u9AN6zch3hfRqDVewUes)

October 27, 2020

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 $v3_group_1 : \iota \Rightarrow o$ 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 $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_parsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_mcart_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_mcart_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_mcart_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k1_parsp_1 : \iota \Rightarrow \iota$ 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. Let $k5_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge (\\
& (v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 \\
& X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow ((v1_funct_1 \\
& (k1_parsp_1 X0)) \wedge ((v1_funct_2 (k1_parsp_1 X0) (k2_zfmisc_1 (\\
& k3_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0)) \\
& (k3_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0))) \\
& (k3_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0))) \wedge \\
& (m1_subset_1 (k1_parsp_1 X0) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \\
& (k3_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0)) \\
& (k3_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0))) \\
& (k3_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge (\\
& (v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 \\
& X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
& (m1_subset_1 X1 (k3_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0) \\
& (u1_struct_0 X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k3_zfmisc_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0))) \Rightarrow (k2_parsp_1 \\
& X0 X1 X2 = k5_binop_1 (k3_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 \\
& X0) (u1_struct_0 X0)) (k1_parsp_1 X0) X1 X2)))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge (\\
& (v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 \\
& X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
& ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (k2_zfmisc_1 (k3_zfmisc_1 (\\
& u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0)) (k3_zfmisc_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0))) (k3_zfmisc_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0))) \wedge (m1_subset_1 \\
& X1 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (k3_zfmisc_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0) (u1_struct_0 X0)) (k3_zfmisc_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0) (u1_struct_0 X0))) (k3_zfmisc_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0) (u1_struct_0 X0)))))) \Rightarrow ((X1 = k1_parsp_1 \\
& X0) \Leftrightarrow (\forall X2.(m1_subset_1 X2 (k3_zfmisc_1 (u1_struct_0 X0) \\
& (u1_struct_0 X0) (u1_struct_0 X0))) \Rightarrow (\forall X3.(m1_subset_1 \\
& X3 (k3_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 \\
& X0))) \Rightarrow (k5_binop_1 (k3_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 \\
& X0) (u1_struct_0 X0)) X1 X2 X3 = k4_domain_1 (u1_struct_0 X0) (u1_struct_0 \\
& X0) (u1_struct_0 X0) (k3_rlvect_1 X0 (k1_mcart_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0) (u1_struct_0 X0) X2) (k1_mcart_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0) (u1_struct_0 X0) X3)) (k3_rlvect_1 X0 (k2_mcart_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) X2) (k2_mcart_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) X3)) (k3_rlvect_1 \\
& X0 (k3_mcart_1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 \\
& X0) X2) (k3_mcart_1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 \\
& X0) X3))))))
\end{aligned} \tag{3}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\ & X0) \wedge ((v33_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge (\\ & (v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 \\ & X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k3_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0) \\ & (u1_struct_0 X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k3_zfmisc_1 \\ & (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0))) \Rightarrow (k2_parsp_1 \\ X0 X1 X2 = k4_domain_1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 \\ & X0) (k3_rlvect_1 X0 (k1_mcart_1 (u1_struct_0 X0) (u1_struct_0 \\ & X0) (u1_struct_0 X0) X1) (k1_mcart_1 (u1_struct_0 X0) (u1_struct_0 \\ & X0) (u1_struct_0 X0) X2)) (k3_rlvect_1 X0 (k2_mcart_1 (u1_struct_0 \\ & X0) (u1_struct_0 X0) (u1_struct_0 X0) X1) (k2_mcart_1 (u1_struct_0 \\ & X0) (u1_struct_0 X0) (u1_struct_0 X0) X2)) (k3_rlvect_1 X0 (k3_mcart_1 \\ & (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) X1) (k3_mcart_1 \\ & (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) X2)))))) \end{aligned}$$