

t9_parsp_1
(TMdMdthHo3ePijvefiapS5Ft8wT27tGhXvy)

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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 $v3_group_1 : \iota \Rightarrow o$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k9_parsp_1 : \iota \Rightarrow \iota$ be given. Let $r1_parsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_parsp_1 : \iota \Rightarrow \iota$ be given. Let $k3_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_group_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_mcart_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_mcart_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_mcart_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_parsp_1 : \iota \Rightarrow \iota$ 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 ((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 (u1_struct_0 (k9_parsp_1 X0))) \Rightarrow (\forall X2. (\\
& m1_subset_1 X2 (u1_struct_0 (k9_parsp_1 X0))) \Rightarrow (\forall X3. (m1_subset_1 \\
& X3 (u1_struct_0 (k9_parsp_1 X0))) \Rightarrow (\forall X4. (m1_subset_1 X4 \\
& (u1_struct_0 (k9_parsp_1 X0))) \Rightarrow ((k5_domain_1 (u1_struct_0 (\\
& k9_parsp_1 X0)) (u1_struct_0 (k9_parsp_1 X0)) (u1_struct_0 (k9_parsp_1 \\
& X0)) (u1_struct_0 (k9_parsp_1 X0)) X1 X2 X3 X4 \in k8_parsp_1 X0) \Leftrightarrow (\\
& (k5_domain_1 (u1_struct_0 (k9_parsp_1 X0)) (u1_struct_0 (k9_parsp_1 \\
& X0)) (u1_struct_0 (k9_parsp_1 X0)) (u1_struct_0 (k9_parsp_1 X0)) \\
& X1 X2 X3 X4 \in k6_parsp_1 X0) \wedge (\exists X5. (m1_subset_1 X5 (k3_zfmisc_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0))) \wedge (\exists X6. \\
& (m1_subset_1 X6 (k3_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0) \\
& (u1_struct_0 X0))) \wedge (\exists X7. (m1_subset_1 X7 (k3_zfmisc_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0))) \wedge (\exists X8. \\
& (m1_subset_1 X8 (k3_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0) \\
& (u1_struct_0 X0))) \wedge ((k5_domain_1 (u1_struct_0 (k9_parsp_1 X0)) \\
& (u1_struct_0 (k9_parsp_1 X0)) (u1_struct_0 (k9_parsp_1 X0)) (\\
& u1_struct_0 (k9_parsp_1 X0)) X1 X2 X3 X4 = k5_domain_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)) (k3_zfmisc_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0)) X5 X6 X7 X8) \wedge \\
& ((k5_algstr_0 X0 (k8_group_1 X0 (k5_algstr_0 X0 (k1_mcart_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0) (u1_struct_0 X0) X5) (k1_mcart_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0) (u1_struct_0 X0) X6)) (k5_algstr_0 X0 (k2_mcart_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) X7) (k2_mcart_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) X8))) (k8_group_1 \\
& X0 (k5_algstr_0 X0 (k1_mcart_1 (u1_struct_0 X0) (u1_struct_0 X0) \\
& (u1_struct_0 X0) X7) (k1_mcart_1 (u1_struct_0 X0) (u1_struct_0 \\
& X0) (u1_struct_0 X0) X8)) (k5_algstr_0 X0 (k2_mcart_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0) (u1_struct_0 X0) X5) (k2_mcart_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0) (u1_struct_0 X0) X6))) = k4_struct_0 X0) \wedge (\\
& (k5_algstr_0 X0 (k8_group_1 X0 (k5_algstr_0 X0 (k1_mcart_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0) (u1_struct_0 X0) X5) (k1_mcart_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0) (u1_struct_0 X0) X6)) (k5_algstr_0 X0 (k3_mcart_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) X7) (k3_mcart_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) X8))) (k8_group_1 \\
& X0 (k5_algstr_0 X0 (k1_mcart_1 (u1_struct_0 X0) (u1_struct_0 X0) \\
& (u1_struct_0 X0) X7) (k1_mcart_1 (u1_struct_0 X0) (u1_struct_0 \\
& X0) (u1_struct_0 X0) X8)) (k5_algstr_0 X0 (k3_mcart_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0) (u1_struct_0 X0) X5) (k3_mcart_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0) (u1_struct_0 X0) X6))) = k4_struct_0 X0) \wedge (\\
& k5_algstr_0 X0 (k8_group_1 X0 (k5_algstr_0 X0 (k2_mcart_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0) (u1_struct_0 X0) X5) (k2_mcart_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0) (u1_struct_0 X0) X6)) (k5_algstr_0 X0 (k3_mcart_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) X7) (k3_mcart_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) X8))) (k8_group_1 \\
& X0 (k5_algstr_0 X0 (k2_mcart_1 (u1_struct_0 X0) (u1_struct_0 X0) \\
& (u1_struct_0 X0) X7) (k2_mcart_1 (u1_struct_0 X0) (u1_struct_0 \\
& X0) (u1_struct_0 X0) X8)) (k5_algstr_0 X0 (k3_mcart_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0) (u1_struct_0 X0) X5) (k3_mcart_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0) (u1_struct_0 X0) X6))) = k4_struct_0 X0)))))))))
\end{aligned}$$

(1)

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v33_algstr_0 X0) \wedge (v3_group_1 X0) \wedge (v5_group_1 X0) \wedge \\
& (v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 \\
& X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
& (m1_subset_1 X1 (u1_struct_0 (k9_parsp_1 X0))) \Rightarrow (\forall X2. (\\
& m1_subset_1 X2 (u1_struct_0 (k9_parsp_1 X0))) \Rightarrow (\forall X3. (m1_subset_1 \\
& X3 (u1_struct_0 (k9_parsp_1 X0))) \Rightarrow (\forall X4. (m1_subset_1 X4 \\
& (u1_struct_0 (k9_parsp_1 X0))) \Rightarrow ((r1_parsp_1 (k9_parsp_1 X0) \\
& X1 X2 X3 X4) \Leftrightarrow (k5_domain_1 (u1_struct_0 (k9_parsp_1 X0)) (u1_struct_0 \\
& (k9_parsp_1 X0)) (u1_struct_0 (k9_parsp_1 X0)) (u1_struct_0 (\\
& k9_parsp_1 X0)) X1 X2 X3 X4 \in k8_parsp_1 X0))))))
\end{aligned} \tag{2}$$

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 (u1_struct_0 (k9_parsp_1 X0))) \Rightarrow (\forall X2. (\\
& m1_subset_1 X2 (u1_struct_0 (k9_parsp_1 X0))) \Rightarrow (\forall X3. (m1_subset_1 \\
& X3 (u1_struct_0 (k9_parsp_1 X0))) \Rightarrow (\forall X4. (m1_subset_1 X4 \\
& (u1_struct_0 (k9_parsp_1 X0))) \Rightarrow ((r1_parsp_1 (k9_parsp_1 X0) \\
X1 X2 X3 X4) \Leftrightarrow ((k5_domain_1 (u1_struct_0 (k9_parsp_1 X0)) (u1_struct_0 \\
& (k9_parsp_1 X0)) (u1_struct_0 (k9_parsp_1 X0)) (u1_struct_0 (\\
& k9_parsp_1 X0)) X1 X2 X3 X4 \in k6_parsp_1 X0) \wedge (\exists X5. (m1_subset_1 \\
& X5 (k3_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 \\
& X0))) \wedge (\exists X6. (m1_subset_1 X6 (k3_zfmisc_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0) (u1_struct_0 X0))) \wedge (\exists X7. (m1_subset_1 \\
& X7 (k3_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 \\
& X0))) \wedge (\exists X8. (m1_subset_1 X8 (k3_zfmisc_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0) (u1_struct_0 X0))) \wedge ((k5_domain_1 (u1_struct_0 \\
& (k9_parsp_1 X0)) (u1_struct_0 (k9_parsp_1 X0)) (u1_struct_0 (\\
k9_parsp_1 X0)) (u1_struct_0 (k9_parsp_1 X0)) X1 X2 X3 X4 = k5_domain_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)) \\
& (k3_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0)) \\
X5 X6 X7 X8) \wedge ((k5_algstr_0 X0 (k8_group_1 X0 (k5_algstr_0 X0 (k1_mcart_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) X5) (k1_mcart_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) X6)) (k5_algstr_0 \\
& X0 (k2_mcart_1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 \\
& X0) X7) (k2_mcart_1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 \\
& X0) X8))) (k8_group_1 X0 (k5_algstr_0 X0 (k1_mcart_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0) (u1_struct_0 X0) X7) (k1_mcart_1 (u1_struct_0 \\
X0) (u1_struct_0 X0) (u1_struct_0 X0) X8)) (k5_algstr_0 X0 (k2_mcart_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) X5) (k2_mcart_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) X6))) = k4_struct_0 \\
& X0) \wedge ((k5_algstr_0 X0 (k8_group_1 X0 (k5_algstr_0 X0 (k1_mcart_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) X5) (k1_mcart_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) X6)) (k5_algstr_0 \\
& X0 (k3_mcart_1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 \\
& X0) X7) (k3_mcart_1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 \\
& X0) X8))) (k8_group_1 X0 (k5_algstr_0 X0 (k1_mcart_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0) (u1_struct_0 X0) X7) (k1_mcart_1 (u1_struct_0 \\
X0) (u1_struct_0 X0) (u1_struct_0 X0) X8)) (k5_algstr_0 X0 (k3_mcart_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) X5) (k3_mcart_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) X6))) = k4_struct_0 \\
& X0) \wedge (k5_algstr_0 X0 (k8_group_1 X0 (k5_algstr_0 X0 (k2_mcart_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) X5) (k2_mcart_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) X6)) (k5_algstr_0 \\
& X0 (k3_mcart_1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 \\
& X0) X7) (k3_mcart_1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 \\
& X0) X8))) (k8_group_1 X0 (k5_algstr_0 X0 (k2_mcart_1 (u1_struct_0 \\
& X0) (u1_struct_0 X0) (u1_struct_0 X0) X7) (k2_mcart_1 (u1_struct_0 \\
X0) (u1_struct_0 X0) (u1_struct_0 X0) X8)) (k5_algstr_0 X0 (k3_mcart_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) X5) (k3_mcart_1 \\
& (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X0) X6))) = k4_struct_0 \\
& X0))))))))))
\end{aligned}$$