

t28_ortsp_1

(TMYr98jjMPq1FrXHnMgGTB6ZDVfUmWgL61Q)

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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 $v8_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v9_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v10_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v11_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_ortsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_symsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_ortsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_group_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_ortsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
 & X0) \wedge ((v33_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge \\
 & ((v4_rlvect_1 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 \\
 & X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
 & ((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((\\
 & v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v8_vectsp_1 X1 X0) \wedge ((v9_vectsp_1 \\
 & X1 X0) \wedge ((v10_vectsp_1 X1 X0) \wedge ((v11_vectsp_1 X1 X0) \wedge ((v1_ortsp_1 \\
 & X1 X0) \wedge (l1_symsp_1 X1 X0)))))))))) \Rightarrow (\forall X2. (m1_subset_1 \\
 & X2 (u1_struct_0 X1)) \Rightarrow (\forall X3. (m1_subset_1 X3 (u1_struct_0 \\
 & X1)) \Rightarrow ((r1_orders_2 X1 X2 X3) \Rightarrow (r1_orders_2 X1 X3 X2))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v33_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge \\
& ((v4_rlvect_1 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
& ((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v8_vectsp_1 X1 X0) \wedge ((v9_vectsp_1 \\
& X1 X0) \wedge ((v10_vectsp_1 X1 X0) \wedge ((v11_vectsp_1 X1 X0) \wedge ((v1_ortsp_1 X1 X0) \wedge (l1_symsp_1 X1 X0)))))))))) \Rightarrow (\forall X2.(m1_subset_1 \\
& X2 (u1_struct_0 X1)) \Rightarrow (r1_orders_2 X1 (k4_struct_0 X1) X2))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\
& (((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v33_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 \\
& X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \wedge (((\neg v2_struct_0 \\
& X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v8_vectsp_1 X1 X0) \wedge ((v9_vectsp_1 X1 X0) \wedge \\
& ((v10_vectsp_1 X1 X0) \wedge ((v11_vectsp_1 X1 X0) \wedge ((v1_ortsp_1 X1 X0) \wedge (l1_symsp_1 X1 X0)))))))))) \wedge ((m1_subset_1 X2 (u1_struct_0 X1)) \wedge \\
& ((m1_subset_1 X3 (u1_struct_0 X1)) \wedge ((m1_subset_1 X4 (u1_struct_0 X1)) \wedge (m1_subset_1 X5 (u1_struct_0 X1)))))) \Rightarrow (m1_subset_1 (k2_ortsp_1 \\
& X0 X1 X2 X3 X4 X5) (u1_struct_0 X0))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v33_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge \\
& ((v4_rlvect_1 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 \\
& X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
& ((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((\\
& v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v8_vectsp_1 X1 X0) \wedge ((v9_vectsp_1 \\
& X1 X0) \wedge ((v10_vectsp_1 X1 X0) \wedge ((v11_vectsp_1 X1 X0) \wedge ((v1_ortsp_1 \\
& X1 X0) \wedge (l1_symsp_1 X1 X0)))))))))) \Rightarrow (\forall X2.(m1_subset_1 \\
& X2 (u1_struct_0 X1)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\
& X1)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X1)) \Rightarrow (\forall X5. \\
& (m1_subset_1 X5 (u1_struct_0 X1)) \Rightarrow ((\neg r1_orders_2 X1 X5 X4) \Rightarrow (\forall X6. \\
& (m1_subset_1 X6 (u1_struct_0 X0)) \Rightarrow ((\exists X7.(m1_subset_1 \\
& X7 (u1_struct_0 X1)) \wedge ((\neg r1_orders_2 X1 X7 X4) \wedge (\neg r1_orders_2 X1 \\
& X7 X2))) \Rightarrow ((X6 = k2_ortsp_1 X0 X1 X2 X3 X4 X5) \Leftrightarrow (\forall X7.(m1_subset_1 \\
& X7 (u1_struct_0 X1)) \Rightarrow (\neg(\neg r1_orders_2 X1 X7 X4) \wedge ((\neg r1_orders_2 \\
& X1 X7 X2) \wedge (X6 \neq k8_group_1 X0 (k8_group_1 X0 (k1_ortsp_1 X0 X1 X4 X5 \\
& X7) (k1_ortsp_1 X0 X1 X7 X4 X2)) (k1_ortsp_1 X0 X1 X2 X7 X3)))))) \wedge \\
& ((\forall X7.(m1_subset_1 X7 (u1_struct_0 X1)) \Rightarrow (\neg(\neg r1_orders_2 \\
& X1 X7 X4) \wedge (\neg r1_orders_2 X1 X7 X2))) \Rightarrow ((X6 = k2_ortsp_1 X0 X1 X2 X3 X4 \\
& X5) \Leftrightarrow (X6 = k4_struct_0 X0)))))))))
\end{aligned} \tag{4}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v33_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge \\
& ((v4_rlvect_1 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 \\
& X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
& ((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((\\
& v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v8_vectsp_1 X1 X0) \wedge ((v9_vectsp_1 \\
& X1 X0) \wedge ((v10_vectsp_1 X1 X0) \wedge ((v11_vectsp_1 X1 X0) \wedge ((v1_ortsp_1 \\
& X1 X0) \wedge (l1_symsp_1 X1 X0)))))))))) \Rightarrow (\forall X2.(m1_subset_1 \\
& X2 (u1_struct_0 X1)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\
& X1)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X1)) \Rightarrow (\forall X5. \\
& (m1_subset_1 X5 (u1_struct_0 X1)) \Rightarrow ((X4 = k4_struct_0 X1) \Rightarrow ((r1_orders_2 \\
& X1 X2 X3) \vee (k2_ortsp_1 X0 X1 X4 X5 X3 X2 = k4_struct_0 X0))))))
\end{aligned}$$