

t22_ortsp_1
(TMLMdL3ExwsPdYPS1nDBUVZYzLJ3XRPpTvp)

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 $v2_rlvect_1 : \iota \Rightarrow o$ 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 $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_ortsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_group_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_group_1 : \iota \Rightarrow \iota$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $k6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l4_algstr_0 : \iota \Rightarrow o$ be given. Let $k5_struct_0 : \iota \Rightarrow \iota$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l5_algstr_0 : \iota \Rightarrow o$ be given. Let $l4_struct_0 : \iota \Rightarrow o$ be given. Let $l3_struct_0 : \iota \Rightarrow o$ be given. Let $v6_vectsp_1 : \iota \Rightarrow o$ be given. Let $v3_vectsp_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v33_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge \\
& ((v4_rlvect_1 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 \\
& X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
& ((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((\\
& v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v8_vectsp_1 X1 X0) \wedge ((v9_vectsp_1 \\
& X1 X0) \wedge ((v10_vectsp_1 X1 X0) \wedge ((v11_vectsp_1 X1 X0) \wedge ((v1_ortsp_1 \\
& X1 X0) \wedge (l1_symsp_1 X1 X0)))))))))) \Rightarrow (\forall X2. (m1_subset_1 \\
& X2 (u1_struct_0 X1)) \Rightarrow (\forall X3. (m1_subset_1 X3 (u1_struct_0 \\
& X1)) \Rightarrow (\forall X4. (m1_subset_1 X4 (u1_struct_0 X1)) \Rightarrow (\forall X5. \\
& (m1_subset_1 X5 (u1_struct_0 X1)) \Rightarrow (\neg (\neg r1_orders_2 X1 X2 X3) \wedge (\\
& (\neg r1_orders_2 X1 X4 X3) \wedge (k8_group_1 X0 (k1_ortsp_1 X0 X1 X3 X2 X5) \\
& (k11_algstr_0 X0 (k1_ortsp_1 X0 X1 X3 X2 X4)) \neq k1_ortsp_1 X0 X1 X3 \\
& X4 X5))))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v33_algstr_0 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge \\
& ((v4_rlvect_1 X0) \wedge ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 \\
& X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow (\forall X1. \\
& ((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((\\
& v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v8_vectsp_1 X1 X0) \wedge ((v9_vectsp_1 \\
& X1 X0) \wedge ((v10_vectsp_1 X1 X0) \wedge ((v11_vectsp_1 X1 X0) \wedge ((v1_ortsp_1 \\
& X1 X0) \wedge (l1_symsp_1 X1 X0)))))))))) \Rightarrow (\forall X2.(m1_subset_1 \\
& X2 (u1_struct_0 X1)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\
& X1)) \Rightarrow ((\neg r1_orders_2 X1 X2 X3) \Rightarrow (k1_ortsp_1 X0 X1 X3 X2 X2 = k1_group_1 \\
& X0))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v5_group_1 \\
& X0) \wedge (l3_algstr_0 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\
& m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (k8_group_1 X0 X1 X2 = k6_algstr_0 \\
& X0 X1 X2)
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((v4_vectsp_1 X0) \wedge (l4_algstr_0 \\
& X0))) \Rightarrow (k1_group_1 X0 = k5_struct_0 X0)
\end{aligned} \tag{4}$$

Assume the following.

$$\forall X0. (l6_algstr_0 X0) \Rightarrow ((l2_algstr_0 X0) \wedge (l5_algstr_0 X0)) \tag{5}$$

Assume the following.

$$\forall X0. (l5_algstr_0 X0) \Rightarrow ((l4_algstr_0 X0) \wedge (l4_struct_0 X0)) \tag{6}$$

Assume the following.

$$\forall X0. (l4_algstr_0 X0) \Rightarrow ((l3_struct_0 X0) \wedge (l3_algstr_0 X0)) \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. (((\neg v2_struct_0 \\
& X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v33_algstr_0 X0) \wedge \\
& ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v3_group_1 \\
& X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge (\\
& l6_algstr_0 X0)))))))))) \wedge (((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 \\
& X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge \\
& ((v8_vectsp_1 X1 X0) \wedge ((v9_vectsp_1 X1 X0) \wedge ((v10_vectsp_1 X1 X0) \wedge \\
& ((v11_vectsp_1 X1 X0) \wedge ((v1_ortsp_1 X1 X0) \wedge (l1_symsp_1 X1 X0)))))))))) \wedge \\
& ((m1_subset_1 X2 (u1_struct_0 X1)) \wedge ((m1_subset_1 X3 (u1_struct_0 \\
& X1)) \wedge (m1_subset_1 X4 (u1_struct_0 X1)))))) \Rightarrow (m1_subset_1 (k1_ortsp_1 \\
& X0 X1 X2 X3 X4) (u1_struct_0 X0))
\end{aligned} \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((l5_algstr_0 X0)\wedge(m1_subset_1 X1 (u1_struct_0 X0)))\Rightarrow(m1_subset_1 (k11_algstr_0 X0 X1) (u1_struct_0 X0)) \quad (9)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l4_algstr_0 X0))\Rightarrow((v6_vectsp_1 X0)\Leftrightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(k6_algstr_0 X0 (k5_struct_0 X0) X1 = X1))) \quad (10)$$

Assume the following.

$$\forall X0.(l4_algstr_0 X0)\Rightarrow(((\neg v2_struct_0 X0)\wedge(v4_vectsp_1 X0))\Rightarrow((\neg v2_struct_0 X0)\wedge((v3_vectsp_1 X0)\wedge(v6_vectsp_1 X0)))) \quad (11)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((\neg v6_struct_0 X0)\wedge((v13_algstr_0 X0)\wedge((v33_algstr_0 X0)\wedge((v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge \\ & ((v4_rlvect_1 X0)\wedge((v3_group_1 X0)\wedge((v5_group_1 X0)\wedge((v4_vectsp_1 X0)\wedge((v5_vectsp_1 X0)\wedge(l6_algstr_0 X0))))))))))\Rightarrow(\forall X1. \\ & ((\neg v2_struct_0 X1)\wedge((v13_algstr_0 X1)\wedge((v2_rlvect_1 X1)\wedge((v3_rlvect_1 X1)\wedge((v4_rlvect_1 X1)\wedge((v8_vectsp_1 X1 X0)\wedge((v9_vectsp_1 \\ & X1 X0)\wedge((v10_vectsp_1 X1 X0)\wedge((v11_vectsp_1 X1 X0)\wedge((v1_ortsp_1 X1 X0)\wedge(l1_symsp_1 X1 X0))))))))))\Rightarrow(\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X1))\Rightarrow(\forall X3.(m1_subset_1 X3 (u1_struct_0 X1))\Rightarrow(\forall X4.(m1_subset_1 X4 (u1_struct_0 X1))\Rightarrow(\neg(\neg r1_orders_2 \\ & X1 X2 X3)\wedge((\neg r1_orders_2 X1 X4 X3)\wedge(k1_ortsp_1 X0 X1 X3 X2 X4\neq k11_algstr_0 X0 (k1_ortsp_1 X0 X1 X3 X4 X2)))))))))) \end{aligned}$$