

l70_anproj_2

(TMV4csvqXHPnaHtUgCpbN9L8tmf2VebdCRY)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v7_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ 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 $v5_rlvect_1 : \iota \Rightarrow o$ be given. Let $v6_rlvect_1 : \iota \Rightarrow o$ be given. Let $v7_rlvect_1 : \iota \Rightarrow o$ be given. Let $v8_rlvect_1 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $v2_anproj_2 : \iota \Rightarrow o$ be given. Let $k5_anproj_1 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_collsp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_collsp : \iota \Rightarrow o$ be given. Let $l1_collsp : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v7_struct_0 X0) \wedge ((v13_algstr_0 \\
 & X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\
 & ((v5_rlvect_1 X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 \\
 & X0) \wedge (l1_rlvect_1 X0)))))))))) \Rightarrow (\forall X1. (m1_subset_1 X1 \\
 & (u1_struct_0 (k5_anproj_1 X0))) \Rightarrow (\forall X2. (m1_subset_1 X2 \\
 & (u1_struct_0 (k5_anproj_1 X0))) \Rightarrow (\forall X3. (m1_subset_1 X3 \\
 & (u1_struct_0 (k5_anproj_1 X0))) \Rightarrow (\forall X4. (m1_subset_1 X4 \\
 & (u1_struct_0 (k5_anproj_1 X0))) \Rightarrow (\forall X5. (m1_subset_1 X5 \\
 & (u1_struct_0 (k5_anproj_1 X0))) \Rightarrow (\neg(\neg r1_collsp (k5_anproj_1 \\
 & X0) X1 X2 X3) \wedge ((r1_collsp (k5_anproj_1 X0) X1 X2 X4) \wedge ((r1_collsp \\
 & (k5_anproj_1 X0) X2 X3 X5) \wedge (\forall X6. (m1_subset_1 X6 (u1_struct_0 \\
 & (k5_anproj_1 X0))) \Rightarrow (\neg(r1_collsp (k5_anproj_1 X0) X1 X3 X6) \wedge (r1_collsp \\
 & (k5_anproj_1 X0) X4 X5 X6))))))))))
 \end{aligned}
 \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v7_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\
& ((v5_rlvect_1 X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 \\
& X0) \wedge (l1_rlvect_1 X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 \\
& (u1_struct_0 (k5_anproj_1 X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 \\
& (u1_struct_0 (k5_anproj_1 X0))) \Rightarrow (\forall X3.(m1_subset_1 X3 \\
& (u1_struct_0 (k5_anproj_1 X0))) \Rightarrow (\forall X4.(m1_subset_1 X4 \\
& (u1_struct_0 (k5_anproj_1 X0))) \Rightarrow (\forall X5.(m1_subset_1 X5 \\
& (u1_struct_0 (k5_anproj_1 X0)))) \Rightarrow (\neg(r1_collsp (k5_anproj_1 X0) \\
& X1 X2 X3) \wedge ((r1_collsp (k5_anproj_1 X0) X1 X2 X4) \wedge ((r1_collsp (k5_anproj_1 \\
& X0) X2 X3 X5) \wedge (\forall X6.(m1_subset_1 X6 (u1_struct_0 (k5_anproj_1 \\
& X0)))) \Rightarrow (\neg(r1_collsp (k5_anproj_1 X0) X1 X3 X6) \wedge (r1_collsp (k5_anproj_1 \\
& X0) X4 X5 X6))))))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v7_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\
& ((v5_rlvect_1 X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 \\
& X0) \wedge (l1_rlvect_1 X0)))))))))) \Rightarrow ((\neg v2_struct_0 (k5_anproj_1 \\
& X0)) \wedge (v1_collsp (k5_anproj_1 X0)))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v7_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\
& ((v5_rlvect_1 X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 \\
& X0) \wedge (l1_rlvect_1 X0)))))))))) \Rightarrow ((v1_collsp (k5_anproj_1 X0)) \wedge \\
& (l1_collsp (k5_anproj_1 X0)))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l1_collsp X0)) \Rightarrow ((v2_anproj_2 \\
& X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))) \Rightarrow (\forall X2. \\
& (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\
& (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow \\
& (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (\neg(r1_collsp X0 \\
& X1 X2 X4) \wedge ((r1_collsp X0 X2 X3 X5) \wedge (\forall X6.(m1_subset_1 X6 (\\
& u1_struct_0 X0)) \Rightarrow (\neg(r1_collsp X0 X1 X3 X6) \wedge (r1_collsp X0 X4 X5 X6))))))))))
\end{aligned} \tag{5}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v7_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\
& ((v5_rlvect_1 X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 \\
& X0) \wedge (l1_rlvect_1 X0)))))))))) \Rightarrow (v2_anproj_2 (k5_anproj_1 X0))
\end{aligned}$$