

t34_anproj_2

(TMZc7k2aMBJfm8QdwA7aQCoAR2v7iJCR2Tq)

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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k3_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v2_collsp : \iota \Rightarrow o$ be given. Let $v3_collsp : \iota \Rightarrow o$ be given. Let $v4_collsp : \iota \Rightarrow o$ be given. Let $v2_anproj_2 : \iota \Rightarrow o$ be given. Let $v3_anproj_2 : \iota \Rightarrow o$ be given. Let $l1_collsp : \iota \Rightarrow o$ be given. Let $k5_anproj_1 : \iota \Rightarrow \iota$ be given. Let $v7_anproj_2 : \iota \Rightarrow o$ be given. Let $v8_anproj_2 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v7_struct_0 X0) \wedge ((v13_algstr_0 \\
 & X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\
 & ((v5_rlvect_1 X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 \\
 & X0) \wedge (l1_rlvect_1 X0)))))))))) \Rightarrow (\neg (\exists X1. (m1_subset_1 \\
 & X1 (u1_struct_0 X0)) \wedge (\exists X2. (m1_subset_1 X2 (u1_struct_0 \\
 & X0)) \wedge (\exists X3. (m1_subset_1 X3 (u1_struct_0 X0)) \wedge (\exists X4. \\
 & (m1_subset_1 X4 (u1_struct_0 X0)) \wedge (\forall X5. (m1_subset_1 X5 \\
 & k1_numbers) \Rightarrow (\forall X6. (m1_subset_1 X6 k1_numbers) \Rightarrow (\forall X7. \\
 & (m1_subset_1 X7 k1_numbers) \Rightarrow (\forall X8. (m1_subset_1 X8 k1_numbers) \Rightarrow \\
 & ((k3_rlvect_1 X0 (k3_rlvect_1 X0 (k3_rlvect_1 X0 (k1_rlvect_1 \\
 & X0 X1 X5) (k1_rlvect_1 X0 X2 X6)) (k1_rlvect_1 X0 X3 X7)) (k1_rlvect_1 \\
 & X0 X4 X8) = k4_struct_0 X0) \Rightarrow ((X5 = k6_numbers) \wedge ((X6 = k6_numbers) \wedge \\
 & ((X7 = k6_numbers) \wedge (X8 = k6_numbers)))))))))) \wedge (\forall X1. \\
 & ((\neg v2_struct_0 X1) \wedge ((v2_collsp X1) \wedge ((v3_collsp X1) \wedge ((v4_collsp \\
 & X1) \wedge ((v2_anproj_2 X1) \wedge ((v3_anproj_2 X1) \wedge (l1_collsp X1)))))) \Rightarrow \\
 & (\neg (X1 = k5_anproj_1 X0) \wedge (\neg v7_anproj_2 X1)))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v7_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\
& ((v5_rlvect_1 X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 \\
& X0) \wedge (l1_rlvect_1 X0)))))))))) \Rightarrow (\neg(\exists X1.(m1_subset_1 \\
& X1 (u1_struct_0 X0)) \wedge (\exists X2.(m1_subset_1 X2 (u1_struct_0 \\
& X0)) \wedge (\exists X3.(m1_subset_1 X3 (u1_struct_0 X0)) \wedge (\exists X4. \\
& (m1_subset_1 X4 (u1_struct_0 X0)) \wedge (\forall X5.(m1_subset_1 \\
& X5 (u1_struct_0 X0)) \Rightarrow (\exists X6.(m1_subset_1 X6 k1_numbers) \wedge \\
& (\exists X7.(m1_subset_1 X7 k1_numbers) \wedge (\exists X8.(m1_subset_1 \\
& X8 k1_numbers) \wedge (\exists X9.(m1_subset_1 X9 k1_numbers) \wedge (X5 = \\
& k3_rlvect_1 X0 (k3_rlvect_1 X0 (k3_rlvect_1 X0 (k1_rlvect_1 X0 \\
& X1 X6) (k1_rlvect_1 X0 X2 X7)) (k1_rlvect_1 X0 X3 X8)) (k1_rlvect_1 \\
& X0 X4 X9)))))) \wedge (\forall X5.(m1_subset_1 X5 k1_numbers) \Rightarrow (\forall X6. \\
& (m1_subset_1 X6 k1_numbers) \Rightarrow (\forall X7.(m1_subset_1 X7 k1_numbers) \Rightarrow \\
& (\forall X8.(m1_subset_1 X8 k1_numbers) \Rightarrow ((k3_rlvect_1 X0 (k3_rlvect_1 \\
& X0 (k3_rlvect_1 X0 (k1_rlvect_1 X0 X1 X5) (k1_rlvect_1 X0 X2 X6)) \\
& (k1_rlvect_1 X0 X3 X7)) (k1_rlvect_1 X0 X4 X8) = k4_struct_0 X0) \Rightarrow \\
& ((X5 = k6_numbers) \wedge ((X6 = k6_numbers) \wedge ((X7 = k6_numbers) \wedge (X8 = \\
& k6_numbers)))))))))) \wedge (\forall X1.((\neg v2_struct_0 X1) \wedge (\\
& (v2_collsp X1) \wedge ((v3_collsp X1) \wedge ((v4_collsp X1) \wedge ((v2_anproj_2 \\
& X1) \wedge ((v3_anproj_2 X1) \wedge (l1_collsp X1)))))) \Rightarrow (\neg(X1 = k5_anproj_1 \\
& X0) \wedge (v8_anproj_2 X1)))
\end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v7_struct_0 X0) \wedge ((v13_algstr_0 \\
& X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\
& ((v5_rlvect_1 X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 \\
& X0) \wedge (l1_rlvect_1 X0)))))))))) \Rightarrow (\neg(\exists X1.(m1_subset_1 \\
& X1 (u1_struct_0 X0)) \wedge (\exists X2.(m1_subset_1 X2 (u1_struct_0 \\
& X0)) \wedge (\exists X3.(m1_subset_1 X3 (u1_struct_0 X0)) \wedge (\exists X4. \\
& (m1_subset_1 X4 (u1_struct_0 X0)) \wedge (\forall X5.(m1_subset_1 \\
& X5 (u1_struct_0 X0)) \Rightarrow (\exists X6.(m1_subset_1 X6 k1_numbers) \wedge \\
& (\exists X7.(m1_subset_1 X7 k1_numbers) \wedge (\exists X8.(m1_subset_1 \\
& X8 k1_numbers) \wedge (\exists X9.(m1_subset_1 X9 k1_numbers) \wedge (X5 = \\
& k3_rlvect_1 X0 (k3_rlvect_1 X0 (k3_rlvect_1 X0 (k1_rlvect_1 X0 \\
& X1 X6) (k1_rlvect_1 X0 X2 X7)) (k1_rlvect_1 X0 X3 X8)) (k1_rlvect_1 \\
& X0 X4 X9)))))) \wedge (\forall X5.(m1_subset_1 X5 k1_numbers) \Rightarrow (\forall X6. \\
& (m1_subset_1 X6 k1_numbers) \Rightarrow (\forall X7.(m1_subset_1 X7 k1_numbers) \Rightarrow \\
& (\forall X8.(m1_subset_1 X8 k1_numbers) \Rightarrow ((k3_rlvect_1 X0 (k3_rlvect_1 \\
& X0 (k3_rlvect_1 X0 (k1_rlvect_1 X0 X1 X5) (k1_rlvect_1 X0 X2 X6)) \\
& (k1_rlvect_1 X0 X3 X7)) (k1_rlvect_1 X0 X4 X8) = k4_struct_0 X0) \Rightarrow \\
& ((X5 = k6_numbers) \wedge ((X6 = k6_numbers) \wedge ((X7 = k6_numbers) \wedge (X8 = \\
& k6_numbers)))))))))) \wedge (\forall X1.((\neg v2_struct_0 X1) \wedge (\\
& (v2_collsp X1) \wedge ((v3_collsp X1) \wedge ((v4_collsp X1) \wedge ((v2_anproj_2 \\
& X1) \wedge ((v3_anproj_2 X1) \wedge (l1_collsp X1)))))) \Rightarrow (\neg(X1 = k5_anproj_1 \\
& X0) \wedge ((\neg v7_anproj_2 X1) \wedge (v8_anproj_2 X1))))))
\end{aligned}$$