

t6_projdes1

(TMGgRjNVvzTk7BmJCsuz5RK7x2e8vuGZy3t)

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Let $v2_struct_0 : \iota \Rightarrow o$ 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 $v7_anproj_2 : \iota \Rightarrow o$ be given. Let $l1_collsp : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_collsp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_projdes1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_collsp X0) \wedge ((v3_collsp X0) \wedge \\ & ((v4_collsp X0) \wedge ((v2_anproj_2 X0) \wedge ((v3_anproj_2 X0) \wedge ((\neg v7_anproj_2 \\ & X0) \wedge (l1_collsp X0)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((r1_collsp X0 X1 X2 X3) \Rightarrow ((r1_collsp \\ & X0 X2 X3 X1) \wedge ((r1_collsp X0 X3 X1 X2) \wedge ((r1_collsp X0 X2 X1 X3) \wedge ((r1_collsp \\ & X0 X1 X3 X2) \wedge (r1_collsp X0 X3 X2 X1)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_collsp X0)) \Rightarrow ((v2_collsp X0) \Leftrightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\ & X0)) \Rightarrow ((r1_collsp X0 X1 X2 X1) \wedge ((r1_collsp X0 X1 X1 X2) \wedge (r1_collsp \\ & X0 X1 X2 X2)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_collsp X0) \wedge ((v3_collsp X0) \wedge \\ & ((v4_collsp X0) \wedge ((v2_anproj_2 X0) \wedge ((v3_anproj_2 X0) \wedge ((\neg v7_anproj_2 \\ & X0) \wedge (l1_collsp X0)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\ & (u1_struct_0 X0)) \Rightarrow ((r1_projdes1 X0 X1 X2 X3 X4) \Leftrightarrow (\exists X5.(m1_subset_1 \\ & X5 (u1_struct_0 X0)) \wedge ((r1_collsp X0 X1 X2 X5) \wedge (r1_collsp X0 X3 X4 \\ & X5)))))))))) \end{aligned} \tag{3}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_collsp X0) \wedge ((v3_collsp X0) \wedge \\ & ((v4_collsp X0) \wedge ((v2_anproj_2 X0) \wedge ((v3_anproj_2 X0) \wedge ((\neg v7_anproj_2 \\ & X0) \wedge (l1_collsp X0))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\ & (u1_struct_0 X0)) \Rightarrow ((\neg(\neg r1_collsp X0 X1 X2 X3) \wedge ((\neg r1_collsp X0 \\ & X2 X3 X4) \wedge ((\neg r1_collsp X0 X3 X4 X1) \wedge (\neg r1_collsp X0 X4 X1 X2)))) \Rightarrow (\\ & r1_projdes1 X0 X1 X2 X3 X4)))))) \end{aligned}$$