

t35_anproj_2

(TML3AYWtwyY42LoVqx2eK2E3ewd9VRKkg3h1)

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

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_collsp X0)) \Rightarrow ((v2_anproj_2 \\ & X0) \Leftrightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 \\ & (u1_struct_0 X0)) \Rightarrow (\forall X4. (m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow \\ & (\forall X5. (m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (\neg (r1_collsp X0 \\ & X1 X2 X4) \wedge ((r1_collsp X0 X2 X3 X5) \wedge (\forall X6. (m1_subset_1 X6 (\\ & u1_struct_0 X0)) \Rightarrow (\neg (r1_collsp X0 X1 X3 X6) \wedge (r1_collsp X0 X4 X5 X6)))))))))) \\ & \tag{1} \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_collsp X0) \wedge ((v3_collsp X0) \wedge \\ & ((v4_collsp X0) \wedge ((v2_anproj_2 X0) \wedge ((v3_anproj_2 X0) \wedge (l1_collsp \\ & X0)))))) \Rightarrow ((v7_anproj_2 X0) \Leftrightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4. (m1_subset_1 X4 \\ & (u1_struct_0 X0)) \Rightarrow (\exists X5. (m1_subset_1 X5 (u1_struct_0 X0)) \wedge \\ & ((r1_collsp X0 X1 X2 X5) \wedge (r1_collsp X0 X3 X4 X5))))))))) \\ & \tag{2} \end{aligned}$$

Theorem 1

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