

t13_projpl_1
(TMXbf1bPPAgqKrCkC2AMy3YcGyAbcQ6bqTf)

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Let $l1_incsp_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_incsp_1 : \iota \Rightarrow \iota$ be given. Let $r5_projpl_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r4_projpl_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(l1_incsp_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_incsp_1 \\ & \quad X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_incsp_1 X0)) \Rightarrow (\forall X3. \\ & \quad (m1_subset_1 X3 (u1_incsp_1 X0)) \Rightarrow ((r4_projpl_1 X0 X1 X2 X3) \Rightarrow ((\\ & \quad r4_projpl_1 X0 X1 X3 X2) \wedge ((r4_projpl_1 X0 X2 X1 X3) \wedge ((r4_projpl_1 \\ & \quad X0 X2 X3 X1) \wedge ((r4_projpl_1 X0 X3 X1 X2) \wedge (r4_projpl_1 X0 X3 X2 X1)))))))))) \\ & \hspace{15em} (1) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_incsp_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_incsp_1 \\ & \quad X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_incsp_1 X0)) \Rightarrow (\forall X3. \\ & \quad (m1_subset_1 X3 (u1_incsp_1 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\ & \quad (u1_incsp_1 X0)) \Rightarrow ((r5_projpl_1 X0 X1 X2 X3 X4) \Leftrightarrow ((\neg r4_projpl_1 \\ & \quad X0 X1 X2 X3) \wedge ((\neg r4_projpl_1 X0 X2 X3 X4) \wedge ((\neg r4_projpl_1 X0 X3 X4 X1) \wedge \\ & \quad (\neg r4_projpl_1 X0 X4 X1 X2)))))))))) \\ & \hspace{15em} (2) \end{aligned}$$

Theorem 1

$$\begin{aligned} & \forall X0.(l1_incsp_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_incsp_1 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_incsp_1 X0)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_incsp_1 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\ & (u1_incsp_1 X0)) \Rightarrow ((r5_projpl_1 X0 X1 X2 X3 X4) \Rightarrow ((r5_projpl_1 X0 \\ & X1 X3 X2 X4) \wedge ((r5_projpl_1 X0 X2 X1 X3 X4) \wedge ((r5_projpl_1 X0 X2 X3 X1 \\ & X4) \wedge ((r5_projpl_1 X0 X3 X1 X2 X4) \wedge ((r5_projpl_1 X0 X3 X2 X1 X4) \wedge (\\ & (r5_projpl_1 X0 X1 X2 X4 X3) \wedge ((r5_projpl_1 X0 X1 X3 X4 X2) \wedge ((r5_projpl_1 \\ & X0 X2 X1 X4 X3) \wedge ((r5_projpl_1 X0 X2 X3 X4 X1) \wedge ((r5_projpl_1 X0 X3 X1 \\ & X4 X2) \wedge ((r5_projpl_1 X0 X3 X2 X4 X1) \wedge ((r5_projpl_1 X0 X1 X4 X2 X3) \wedge \\ & ((r5_projpl_1 X0 X1 X4 X3 X2) \wedge ((r5_projpl_1 X0 X2 X4 X1 X3) \wedge ((r5_projpl_1 \\ & X0 X2 X4 X3 X1) \wedge ((r5_projpl_1 X0 X3 X4 X1 X2) \wedge ((r5_projpl_1 X0 X3 X4 \\ & X2 X1) \wedge ((r5_projpl_1 X0 X4 X1 X2 X3) \wedge ((r5_projpl_1 X0 X4 X1 X3 X2) \wedge \\ & ((r5_projpl_1 X0 X4 X2 X1 X3) \wedge ((r5_projpl_1 X0 X4 X2 X3 X1) \wedge ((r5_projpl_1 \\ & X0 X4 X3 X1 X2) \wedge (r5_projpl_1 X0 X4 X3 X2 X1)))))))))))))))))))))))))) \end{aligned}$$