

t2_projpl_1

(TMLHKupH6f8MRczPPyZ4h8aaSdsaTAxHdBs)

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Let $l1_incsp_1 : \iota \Rightarrow o$ be given. Let $v1_projpl_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_incsp_1 : \iota \Rightarrow \iota$ be given. Let $u2_incsp_1 : \iota \Rightarrow \iota$ be given. Let $r4_incsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_incsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.(l1_incsp_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u2_incsp_1 \\
& \quad X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_incsp_1 X0)) \Rightarrow (\forall X3. \\
& \quad (m1_subset_1 X3 (u1_incsp_1 X0)) \Rightarrow ((r4_incsp_1 X0 (k7_domain_1 \\
& \quad (u1_incsp_1 X0) X2 X3) X1) \Leftrightarrow ((r1_incsp_1 X0 X2 X1) \wedge (r1_incsp_1 X0 \\
& \quad \quad X3 X1))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1_incsp_1 X0) \Rightarrow ((v1_projpl_1 X0) \Leftrightarrow (\forall X1.(m1_subset_1 \\
& \quad X1 (u1_incsp_1 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_incsp_1 X0)) \Rightarrow \\
& \quad (\forall X3.(m1_subset_1 X3 (u2_incsp_1 X0)) \Rightarrow (\forall X4.(m1_subset_1 \\
& \quad X4 (u2_incsp_1 X0)) \Rightarrow (\neg(r1_incsp_1 X0 X1 X3) \wedge ((r1_incsp_1 X0 X2 \\
& \quad X3) \wedge (r1_incsp_1 X0 X1 X4) \wedge ((r1_incsp_1 X0 X2 X4) \wedge ((X1 \neq X2) \wedge (X3 \neq \\
& \quad \quad X4))))))))))
\end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(l1_incsp_1 X0) \Rightarrow ((v1_projpl_1 X0) \Leftrightarrow (\forall X1.(m1_subset_1 \\
& \quad X1 (u1_incsp_1 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_incsp_1 X0)) \Rightarrow \\
& \quad (\forall X3.(m1_subset_1 X3 (u2_incsp_1 X0)) \Rightarrow (\forall X4.(m1_subset_1 \\
& \quad X4 (u2_incsp_1 X0)) \Rightarrow (\neg(r4_incsp_1 X0 (k7_domain_1 (u1_incsp_1 \\
& \quad X0) X1 X2) X3) \wedge ((r4_incsp_1 X0 (k7_domain_1 (u1_incsp_1 X0) X1 X2) \\
& \quad \quad X4) \wedge ((X1 \neq X2) \wedge (X3 \neq X4))))))))))
\end{aligned}$$