

t17_projpl_1

(TMRZGfw4BkRogthravLZoaAEQRLqrUiVSL6)

October 27, 2020

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 $r4_projpl_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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.

$$\begin{aligned}
 & \forall X0.(l1_incsp_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_incsp_1 \\
 & \quad X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_incsp_1 X0)) \Rightarrow (\forall X3. \\
 & (m1_subset_1 X3 (u1_incsp_1 X0)) \Rightarrow ((r4_projpl_1 X0 X1 X2 X3) \Leftrightarrow (\exists X4. \\
 & (m1_subset_1 X4 (u2_incsp_1 X0)) \wedge ((r1_incsp_1 X0 X1 X4) \wedge ((r1_incsp_1 \\
 & \quad X0 X2 X4) \wedge (r1_incsp_1 X0 X3 X4)))))))))
 \end{aligned} \tag{1}$$

Theorem 1

$$\begin{aligned}
 & \forall X0.(l1_incsp_1 X0) \Rightarrow (\neg(\neg \forall X1.(m1_subset_1 X1 (u1_incsp_1 \\
 & \quad X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_incsp_1 X0)) \Rightarrow (\forall X3. \\
 & (m1_subset_1 X3 (u1_incsp_1 X0)) \Rightarrow (r4_projpl_1 X0 X1 X2 X3)))))) \wedge \\
 & ((\forall X1.(m1_subset_1 X1 (u1_incsp_1 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\
 & \quad X2 (u1_incsp_1 X0)) \Rightarrow (\exists X3.(m1_subset_1 X3 (u2_incsp_1 X0)) \wedge \\
 & (r4_incsp_1 X0 (k7_domain_1 (u1_incsp_1 X0) X1 X2) X3)))))) \wedge (\forall X1. \\
 & (m1_subset_1 X1 (u1_incsp_1 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\
 & \quad (u2_incsp_1 X0)) \Rightarrow (r1_incsp_1 X0 X1 X2))))))
 \end{aligned}$$