

t37_projpl_1
(TMXewneosxJrM5AcFgc9zDbpQbJ5gxa1Ya9)

October 27, 2020

Let $v6_incsp_1 : \iota \Rightarrow o$ be given. Let $v1_incproj : \iota \Rightarrow o$ be given. Let $v2_incproj : \iota \Rightarrow o$ be given. Let $v3_incproj : \iota \Rightarrow o$ be given. Let $v4_incproj : \iota \Rightarrow o$ be given. Let $v5_incproj : \iota \Rightarrow o$ be given. 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 $u2_incsp_1 : \iota \Rightarrow \iota$ be given. Let $r1_incsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_projpl_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v6_incsp_1 X0) \wedge ((v1_incproj X0) \wedge ((v2_incproj X0) \wedge \\ & ((v3_incproj X0) \wedge ((v4_incproj X0) \wedge (l1_incsp_1 X0)))))) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_incsp_1 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\ & (u1_incsp_1 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u2_incsp_1 X0)) \Rightarrow \\ & ((X1 \neq X2) \Rightarrow ((r1_incsp_1 X0 X1 (k1_projpl_1 X0 X1 X2)) \wedge ((r1_incsp_1 \\ & X0 X2 (k1_projpl_1 X0 X1 X2)) \wedge ((k1_projpl_1 X0 X1 X2 = k1_projpl_1 \\ & X0 X2 X1) \wedge ((r1_incsp_1 X0 X1 X3) \wedge (r1_incsp_1 X0 X2 X3)) \Rightarrow (X3 = k1_projpl_1 \\ & X0 X1 X2)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((v6_incsp_1 X0) \wedge ((v1_incproj \\ & X0) \wedge ((v2_incproj X0) \wedge ((v3_incproj X0) \wedge ((v4_incproj X0) \wedge (l1_incsp_1 \\ & X0)))))) \wedge ((m1_subset_1 X1 (u1_incsp_1 X0)) \wedge (m1_subset_1 X2 (\\ & u1_incsp_1 X0)))) \Rightarrow (m1_subset_1 (k1_projpl_1 X0 X1 X2) (u2_incsp_1 \\ & X0)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v6_incsp_1 X0) \wedge ((v1_incproj X0) \wedge ((v2_incproj X0) \wedge \\ & ((v3_incproj X0) \wedge ((v4_incproj X0) \wedge (l1_incsp_1 X0)))))) \Rightarrow ((v5_incproj \\ & X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 (u2_incsp_1 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u2_incsp_1 X0)) \Rightarrow (\exists X3.(m1_subset_1 X3 \\ & (u1_incsp_1 X0)) \wedge ((r1_incsp_1 X0 X3 X1) \wedge (r1_incsp_1 X0 X3 X2)))))) \end{aligned} \tag{3}$$

Theorem 1

$$\begin{aligned} & \forall X0.((v6_incsp_1 X0) \wedge ((v1_incproj X0) \wedge ((v2_incproj X0) \wedge \\ & ((v3_incproj X0) \wedge ((v4_incproj X0) \wedge ((v5_incproj X0) \wedge (l1_incsp_1 \\ & X0)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_incsp_1 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_incsp_1 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\ & (u1_incsp_1 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_incsp_1 X0)) \Rightarrow \\ & (\forall X5.(m1_subset_1 X5 (u1_incsp_1 X0)) \Rightarrow (\forall X6.(m1_subset_1 \\ & X6 (u2_incsp_1 X0)) \Rightarrow (\forall X7.(m1_subset_1 X7 (u2_incsp_1 X0)) \Rightarrow \\ & (\neg(r1_incsp_1 X0 X2 X7) \wedge ((r1_incsp_1 X0 X3 X7) \wedge ((\neg r1_incsp_1 X0 \\ & X1 X7) \wedge ((X2 \neq X3) \wedge ((X4 \neq X1) \wedge ((X5 \neq X1) \wedge ((r1_incsp_1 X0 X4 (k1_projpl_1 \\ & X0 X1 X2)) \wedge ((r1_incsp_1 X0 X5 (k1_projpl_1 X0 X1 X3)) \wedge (\forall X8. \\ & (m1_subset_1 X8 (u1_incsp_1 X0)) \Rightarrow (\neg(r1_incsp_1 X0 X8 (k1_projpl_1 \\ & X0 X4 X5)) \wedge ((r1_incsp_1 X0 X8 X6) \wedge (X8 \neq X1))))))))))))))))) \end{aligned}$$