

t25_projpl_1

(TMTuoJV8LBfWk4Ah8gjNU8p5juSUEt5YEQd)

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 $k2_projpl_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_projpl_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v6_incsp_1 X0) \wedge ((v1_incproj X0) \wedge ((v2_incproj X0) \wedge \\ & ((v3_incproj X0) \wedge ((v4_incproj X0) \wedge ((v5_incproj X0) \wedge (l1_incsp_1 \\ & X0)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_incsp_1 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u2_incsp_1 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\ & (u2_incsp_1 X0)) \Rightarrow ((X2 \neq X3) \Rightarrow ((r1_incsp_1 X0 (k2_projpl_1 X0 X2 \\ & X3) X2) \wedge ((r1_incsp_1 X0 (k2_projpl_1 X0 X2 X3) X3) \wedge ((k2_projpl_1 \\ & X0 X2 X3 = k2_projpl_1 X0 X3 X2) \wedge ((r1_incsp_1 X0 X1 X2) \wedge (r1_incsp_1 \\ & X0 X1 X3)) \Rightarrow (X1 = k2_projpl_1 X0 X2 X3)))))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v6_incsp_1 X0) \wedge ((v1_incproj X0) \wedge ((v2_incproj X0) \wedge \\ & ((v3_incproj X0) \wedge ((v4_incproj X0) \wedge (l1_incsp_1 X0)))))) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_incsp_1 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\ & (u1_incsp_1 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u2_incsp_1 X0)) \Rightarrow \\ & ((X1 \neq X2) \Rightarrow ((r1_incsp_1 X0 X1 (k1_projpl_1 X0 X1 X2)) \wedge ((r1_incsp_1 \\ & X0 X2 (k1_projpl_1 X0 X1 X2)) \wedge ((k1_projpl_1 X0 X1 X2 = k1_projpl_1 \\ & X0 X2 X1) \wedge ((r1_incsp_1 X0 X1 X3) \wedge (r1_incsp_1 X0 X2 X3)) \Rightarrow (X3 = k1_projpl_1 \\ & X0 X1 X2)))))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((v6_incsp_1 X0) \wedge ((v1_incproj \\ & X0) \wedge ((v2_incproj X0) \wedge ((v3_incproj X0) \wedge ((v4_incproj X0) \wedge ((v5_incproj \\ & X0) \wedge (l1_incsp_1 X0)))))) \wedge ((m1_subset_1 X1 (u2_incsp_1 X0)) \wedge \\ & (m1_subset_1 X2 (u2_incsp_1 X0))) \Rightarrow (m1_subset_1 (k2_projpl_1 \\ & X0 X1 X2) (u1_incsp_1 X0)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((v6_incsp_1 X0)\wedge((v1_incproj \\ & X0)\wedge((v2_incproj X0)\wedge((v3_incproj X0)\wedge((v4_incproj X0)\wedge(l1_incsp_1 \\ & X0))))))\wedge((m1_subset_1 X1 (u1_incsp_1 X0))\wedge(m1_subset_1 X2 (\\ & u1_incsp_1 X0)))\Rightarrow(m1_subset_1 (k1_projpl_1 X0 X1 X2) (u2_incsp_1 \\ & X0)) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_incsp_1 X0)\Rightarrow((v2_incproj X0)\Leftrightarrow(\neg\forall X1.(m1_subset_1 \\ & X1 (u1_incsp_1 X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (u2_incsp_1 X0))\Rightarrow \\ & (r1_incsp_1 X0 X1 X2)))) \end{aligned} \tag{5}$$

Theorem 1

$$\begin{aligned} & \forall X0.(((v6_incsp_1 X0)\wedge((v1_incproj X0)\wedge((v2_incproj X0)\wedge \\ & ((v3_incproj X0)\wedge((v4_incproj X0)\wedge((v5_incproj X0)\wedge(l1_incsp_1 \\ & X0))))))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_incsp_1 X0))\Rightarrow(\forall X2. \\ & (m1_subset_1 X2 (u1_incsp_1 X0))\Rightarrow(\forall X3.(m1_subset_1 X3 \\ & (u2_incsp_1 X0))\Rightarrow(\forall X4.(m1_subset_1 X4 (u2_incsp_1 X0))\Rightarrow \\ & ((r1_incsp_1 X0 X1 X3)\Rightarrow((X3 = X4)\vee((r1_incsp_1 X0 X2 X3)\vee((X1 = k2_projpl_1 \\ & X0 X3 X4)\vee((r1_incsp_1 X0 (k2_projpl_1 X0 (k1_projpl_1 X0 X2 X1) \\ & X4) X4)\wedge(\neg r1_incsp_1 X0 (k2_projpl_1 X0 (k1_projpl_1 X0 X2 X1) X4 \\ & X3)))))))))) \end{aligned}$$