

t32_projpl_1
(TMdnPeb6WvSYf886t93QniBLwT6GTh79769)

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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 $l1_incsp_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_incsp_1 : \iota \Rightarrow \iota$ be given. Let $r1_incsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_projpl_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2_incsp_1 : \iota \Rightarrow \iota$ 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.

$$\begin{aligned} & \forall X0. (l1_incsp_1 X0) \Rightarrow ((v1_incproj X0) \Leftrightarrow (\forall X1. (m1_subset_1 \\ & X1 (u1_incsp_1 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_incsp_1 X0)) \Rightarrow \\ & (\forall X3. (m1_subset_1 X3 (u2_incsp_1 X0)) \Rightarrow (\forall X4. (m1_subset_1 \\ & X4 (u2_incsp_1 X0)) \Rightarrow (\neg (r1_incsp_1 X0 X1 X3) \wedge ((r1_incsp_1 X0 X2 \\ & X3) \wedge ((r1_incsp_1 X0 X1 X4) \wedge ((r1_incsp_1 X0 X2 X4) \wedge ((X1 \neq X2) \wedge (X3 \neq \\ & X4)))))))))) \end{aligned} \tag{3}$$

Theorem 1

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