

t9_projred1

(TMV7NT9S1yeroHHF8FNupzFfLts7d3BteZQ)

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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 $u2_incsp_1 : \iota \Rightarrow \iota$ be given. Let $r1_incsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v6_incsp_1 X0) \wedge ((v1_incproj X0) \wedge ((v2_incproj X0) \wedge \\ & ((v3_incproj X0) \wedge ((v4_incproj X0) \wedge (l1_incsp_1 X0)))))) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_incsp_1 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\ & (u1_incsp_1 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u2_incsp_1 X0)) \Rightarrow \\ & (\exists X4.(m1_subset_1 X4 (u1_incsp_1 X0)) \wedge ((r1_incsp_1 X0 \\ & X4 X3) \wedge ((X4 \neq X1) \wedge (X4 \neq X2))))))) \end{aligned} \quad (1)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.(l1_incsp_1 X0) \Rightarrow ((v6_incsp_1 X0) \Leftrightarrow (\forall X1.(m1_subset_1 \\ & X1 (u1_incsp_1 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_incsp_1 X0)) \Rightarrow \\ & (\exists X3.(m1_subset_1 X3 (u2_incsp_1 X0)) \wedge ((r1_incsp_1 X0 \\ & X1 X3) \wedge (r1_incsp_1 X0 X2 X3)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_incsp_1 X0) \Rightarrow ((v1_incproj X0) \Leftrightarrow (\forall X1.(m1_subset_1 \\ & X1 (u1_incsp_1 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_incsp_1 X0)) \Rightarrow \\ & (\forall X3.(m1_subset_1 X3 (u2_incsp_1 X0)) \Rightarrow (\forall X4.(m1_subset_1 \\ & X4 (u2_incsp_1 X0)) \Rightarrow (\neg (r1_incsp_1 X0 X1 X3) \wedge ((r1_incsp_1 X0 X2 \\ & X3) \wedge (r1_incsp_1 X0 X1 X4) \wedge ((r1_incsp_1 X0 X2 X4) \wedge ((X1 \neq X2) \wedge (X3 \neq \\ & X4)))))))))) \end{aligned} \quad (4)$$

Theorem 1

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