

t3_projred1

(TMEzFQqgjTzhCt67rVpkXEMWEw83XaFL2mv)

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 $l1_incsp_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u2_incsp_1 : \iota \Rightarrow \iota$ be given. Let $u1_incsp_1 : \iota \Rightarrow \iota$ be given. Let $r1_incsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\begin{aligned} \forall X0.(l1_incsp_1 X0) \Rightarrow & ((v1_incproj X0) \Leftrightarrow (\forall X1.(m1_subset_1 \\ X1 (u1_incsp_1 X0) \Rightarrow & (\forall X2.(m1_subset_1 X2 (u1_incsp_1 X0)) \Rightarrow \\ (\forall X3.(m1_subset_1 X3 (u2_incsp_1 X0) \Rightarrow & (\forall X4.(m1_subset_1 \\ X4 (u2_incsp_1 X0) \Rightarrow \neg(r1_incsp_1 X0 X1 X3) \wedge & ((r1_incsp_1 X0 X2 \\ X3) \wedge ((r1_incsp_1 X0 X1 X4) \wedge ((r1_incsp_1 X0 X2 X4) \wedge & ((X1 \neq X2) \wedge (X3 \neq \\ X4)))))))))) \end{aligned} \quad (2)$$

Theorem 1

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