

t16_grcat_1
(TMVzyyMnkWQoZUHQj94FkN6jJQFLe454R1n)

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Let $v2_grcat_1 : \iota \Rightarrow o$ be given. Let $l1_grcat_1 : \iota \Rightarrow o$ be given. Let $k7_grcat_1 : \iota \Rightarrow \iota$ be given. Let $k8_grcat_1 : \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_grcat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(l1_grcat_1 X0) \Rightarrow ((\neg v2_struct_0 (k8_grcat_1 X0)) \wedge \\ & ((v13_algstr_0 (k8_grcat_1 X0)) \wedge ((v3_rlvect_1 (k8_grcat_1 X0)) \wedge \\ & ((v4_rlvect_1 (k8_grcat_1 X0)) \wedge (l2_algstr_0 (k8_grcat_1 X0)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_grcat_1 X0) \Rightarrow ((\neg v2_struct_0 (k7_grcat_1 X0)) \wedge \\ & ((v13_algstr_0 (k7_grcat_1 X0)) \wedge ((v3_rlvect_1 (k7_grcat_1 X0)) \wedge \\ & ((v4_rlvect_1 (k7_grcat_1 X0)) \wedge (l2_algstr_0 (k7_grcat_1 X0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_rlvect_1 \\ & X0) \wedge ((v4_rlvect_1 X0) \wedge (l2_algstr_0 X0)))))) \Rightarrow (\forall X1.((\neg \\ & v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 \\ & X1) \wedge (l2_algstr_0 X1)))))) \Rightarrow (\forall X2.((v2_grcat_1 X2) \wedge (l1_grcat_1 \\ & X2)) \Rightarrow ((m1_grcat_1 X2 X0 X1) \Leftrightarrow ((k7_grcat_1 X2 = X0) \wedge (k8_grcat_1 \\ & X2 = X1)))))) \end{aligned} \quad (3)$$

Theorem 1

$$\begin{aligned} & \forall X0.(((v2_grcat_1 X0) \wedge (l1_grcat_1 X0)) \Rightarrow (\forall X1.((\\ & v2_grcat_1 X1) \wedge (l1_grcat_1 X1)) \Rightarrow (\neg (k7_grcat_1 X0 = k8_grcat_1 \\ & X1) \wedge (\forall X2.((\neg v2_struct_0 X2) \wedge ((v13_algstr_0 X2) \wedge ((v3_rlvect_1 \\ & X2) \wedge ((v4_rlvect_1 X2) \wedge (l2_algstr_0 X2)))))) \Rightarrow (\forall X3.((\neg \\ & v2_struct_0 X3) \wedge ((v13_algstr_0 X3) \wedge ((v3_rlvect_1 X3) \wedge ((v4_rlvect_1 \\ & X3) \wedge (l2_algstr_0 X3)))))) \Rightarrow (\forall X4.((\neg v2_struct_0 X4) \wedge ((\\ & v13_algstr_0 X4) \wedge ((v3_rlvect_1 X4) \wedge ((v4_rlvect_1 X4) \wedge (l2_algstr_0 \\ & X4)))))) \Rightarrow (\neg (m1_grcat_1 X0 X3 X4) \wedge (m1_grcat_1 X1 X2 X3)))))) \end{aligned}$$