

t14_grcat_1
(TMMe7rxW6o4DsXFg672amGxjT6tMUF5nwo6)

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Let $v2_grcat_1 : \iota \Rightarrow o$ be given. Let $l1_grcat_1 : \iota \Rightarrow o$ 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. Let $k8_grcat_1 : \iota \Rightarrow \iota$ be given. Let $k7_grcat_1 : \iota \Rightarrow \iota$ 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

$$\begin{aligned} \forall X0. ((v2_grcat_1 X0) \wedge (l1_grcat_1 X0)) \Rightarrow (\exists X1. ((\\ \neg v2_struct_0 X1) \wedge (v13_algstr_0 X1) \wedge (v3_rlvect_1 X1) \wedge ((v4_rlvect_1 \\ X1) \wedge (l2_algstr_0 X1)))) \wedge (\exists X2. ((\neg v2_struct_0 X2) \wedge ((\\ v13_algstr_0 X2) \wedge (v3_rlvect_1 X2) \wedge (v4_rlvect_1 X2) \wedge (l2_algstr_0 \\ X2)))) \wedge (m1_grcat_1 X0 X1 X2)) \end{aligned}$$