

t30_altcat_2

(TMbN4tqraSbj5pQjgmQPqkNux6MgVqnsBBq)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_altcat_1 : \iota \Rightarrow o$ be given. Let $l2_altcat_1 : \iota \Rightarrow o$ be given. Let $v2_altcat_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_altcat_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $g2_altcat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_altcat_1 : \iota \Rightarrow \iota$ be given. Let $u2_altcat_1 : \iota \Rightarrow \iota$ be given. Let $k1_realset1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_altcat_1 X0) \wedge (l2_altcat_1 \\ & X0))) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge ((v2_altcat_1 X1) \wedge (m1_altcat_2 \\ & X1 X0))) \Rightarrow (\forall X2. ((\neg v2_struct_0 X2) \wedge ((v2_altcat_1 X2) \wedge (\\ & m1_altcat_2 X2 X0))) \Rightarrow (((u1_struct_0 X1 = u1_struct_0 X2) \wedge (u1_altcat_1 \\ & X1 = u1_altcat_1 X2)) \Rightarrow (g2_altcat_1 (u1_struct_0 X1) (u1_altcat_1 \\ & X1) (u2_altcat_1 X1) = g2_altcat_1 (u1_struct_0 X2) (u1_altcat_1 \\ & X2) (u2_altcat_1 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. (l2_altcat_1 X0) \Rightarrow (\forall X1. (m1_altcat_2 X1 X0) \Rightarrow \\ & ((v2_altcat_2 X1 X0) \Leftrightarrow (u1_altcat_1 X1 = k1_realset1 (u1_altcat_1 \\ & X0) (u1_struct_0 X1)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_altcat_1 X0) \wedge (l2_altcat_1 \\ & X0))) \Rightarrow (\forall X1. (m1_altcat_2 X1 X0) \Rightarrow (((\neg v2_struct_0 X1) \wedge (\\ & v2_altcat_2 X1 X0)) \Rightarrow (v2_altcat_1 X1))) \end{aligned} \tag{3}$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_altcat_1 X0) \wedge (l2_altcat_1 \\ & X0))) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge ((v2_altcat_2 X1 X0) \wedge (\\ & m1_altcat_2 X1 X0))) \Rightarrow (\forall X2. ((\neg v2_struct_0 X2) \wedge ((v2_altcat_2 \\ & X2 X0) \wedge (m1_altcat_2 X2 X0))) \Rightarrow ((u1_struct_0 X1 = u1_struct_0 X2) \Rightarrow \\ & (g2_altcat_1 (u1_struct_0 X1) (u1_altcat_1 X1) (u2_altcat_1 X1) = \\ & g2_altcat_1 (u1_struct_0 X2) (u1_altcat_1 X2) (u2_altcat_1 X2)))))) \end{aligned}$$