

t40_yellow18 (TMMYtCZtp- wLe6uYzPVrWPPVkHK3L1Tzzfzk)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_altcat_1 : \iota \Rightarrow o$ be given. Let $v11_altcat_1 : \iota \Rightarrow o$ be given. Let $v12_altcat_1 : \iota \Rightarrow o$ be given. Let $v4_yellow18 : \iota \Rightarrow o$ be given. Let $l2_altcat_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_altcat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v3_altcat_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k3_yellow18 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_altcat_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_altcat_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_altcat_1 X0) \wedge ((v11_altcat_1 \\ & X0) \wedge ((v12_altcat_1 X0) \wedge (l2_altcat_1 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_altcat_1 X0 X1 X2)) \Rightarrow ((v3_altcat_3 \\ & X3 X0 X1 X2) \Rightarrow ((v1_altcat_3 X3 X0 X1 X2) \wedge (v2_altcat_3 X3 X0 X1 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_altcat_1 X0) \wedge ((v11_altcat_1 \\ & X0) \wedge ((v12_altcat_1 X0) \wedge ((v4_yellow18 X0) \wedge (l2_altcat_1 X0)))))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow (\neg(k1_altcat_1 X0 X1 X2 \neq k1_xboole_0) \wedge ((\\ & k1_altcat_1 X0 X2 X1 \neq k1_xboole_0) \wedge (\exists X3.(m1_subset_1 X3 \\ & (k1_altcat_1 X0 X1 X2)) \wedge ((v2_altcat_3 X3 X0 X1 X2) \wedge (\neg v2_funct_1 \\ & X3)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_altcat_1 X0) \wedge ((v11_altcat_1 \\ & X0) \wedge ((v12_altcat_1 X0) \wedge ((v4_yellow18 X0) \wedge (l2_altcat_1 X0)))))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow (\neg(k1_altcat_1 X0 X1 X2 \neq k1_xboole_0) \wedge ((\\ & k1_altcat_1 X0 X2 X1 \neq k1_xboole_0) \wedge (\exists X3.(m1_subset_1 X3 \\ & (k1_altcat_1 X0 X1 X2)) \wedge ((v1_altcat_3 X3 X0 X1 X2) \wedge (k10_xtuple_0 \\ & X3 \neq k3_yellow18 X0 X2)))))) \end{aligned} \quad (3)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_altcat_1 X0) \wedge ((v11_altcat_1 \\ & X0) \wedge ((v12_altcat_1 X0) \wedge ((v4_yellow18 X0) \wedge (l2_altcat_1 X0)))))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow (\neg(k1_altcat_1 X0 X1 X2 \neq k1_xboole_0) \wedge ((\\ & k1_altcat_1 X0 X2 X1 \neq k1_xboole_0) \wedge (\exists X3.(m1_subset_1 X3 \\ & (k1_altcat_1 X0 X1 X2)) \wedge (v3_altcat_3 X3 X0 X1 X2) \wedge (\neg(v2_funct_1 \\ & X3) \wedge (k10_xtuple_0 X3 = k3_yellow18 X0 X2)))))))) \end{aligned}$$