

t10_graphsp (TMXQwdZwNFpYA- jsL1vFfm77jTFZjW78P1wa)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_graph_1 : \iota \Rightarrow o$ be given. Let $l1_graph_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $u4_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_graph_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_graph_1 : \iota \Rightarrow \iota$ be given. Let $u2_graph_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \Rightarrow ((v2_graph_1 \\ & X0) \Leftrightarrow (\forall X1. \forall X2. ((X1 \in u4_struct_0 X0) \wedge ((X2 \in u4_struct_0 \\ & X0) \wedge ((k1_funct_1 (u1_graph_1 X0) X1 = k1_funct_1 (u1_graph_1 X0) \\ & X2) \wedge (k1_funct_1 (u2_graph_1 X0) X1 = k1_funct_1 (u2_graph_1 X0) \\ & X2)))) \Rightarrow (X1 = X2))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 \\ & (u1_struct_0 X0)) \Rightarrow (\forall X3. (r1_graph_4 X0 X1 X2 X3) \Leftrightarrow ((k1_funct_1 \\ & (u1_graph_1 X0) X3 = X1) \wedge (k1_funct_1 (u2_graph_1 X0) X3 = X2)))))) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_graph_1 X0) \wedge (l1_graph_1 \\ & X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \forall X4. ((X3 \in \\ & u4_struct_0 X0) \wedge ((X4 \in u4_struct_0 X0) \wedge ((r1_graph_4 X0 X1 X2 X3) \wedge \\ & (r1_graph_4 X0 X1 X2 X4)))) \Rightarrow (X3 = X4)))))) \end{aligned}$$