

t3_graph_1 (TMNYteLPNyzLwk- fGQH8q8GZwjCMtp83LqoW)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_graph_1 : \iota \Rightarrow o$ be given. Let $u4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_graph_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $u2_graph_1 : \iota \Rightarrow \iota$ be given. Let $r4_graph_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m3_graph_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \wedge ((\neg v2_struct_0 X1) \wedge (l1_graph_1 X1))) \Rightarrow (r4_graph_1 X0 X0) \quad (1)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge (l1_graph_1 X1)) \Rightarrow ((r4_graph_1 X0 X1) \Leftrightarrow (m3_graph_1 X0 X1))) \quad (2)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge (l1_graph_1 X1)) \Rightarrow (((m3_graph_1 X1 X0) \Leftrightarrow ((r1_tarski (u1_struct_0 X1) (u1_struct_0 X0)) \wedge ((r1_tarski (u4_struct_0 X1) (u4_struct_0 X0)) \wedge (\forall X2. (X2 \in u4_struct_0 X1) \Rightarrow ((k1_funct_1 (u1_graph_1 X1) X2 = k1_funct_1 (u1_graph_1 X0) X2) \wedge ((k1_funct_1 (u2_graph_1 X1) X2 = k1_funct_1 (u2_graph_1 X0) X2) \wedge ((k1_funct_1 (u1_graph_1 X0) X2 \in u1_struct_0 X1) \wedge (k1_funct_1 (u2_graph_1 X0) X2 \in u1_struct_0 X1)))))))))) \quad (3)$$

Theorem 1

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \Rightarrow (\forall X1. (X1 \in u4_struct_0 X0) \Rightarrow ((k1_funct_1 (u1_graph_1 X0) X1 \in u1_struct_0 X0) \wedge (k1_funct_1 (u2_graph_1 X0) X1 \in u1_struct_0 X0)))$$