

t23_graph_1 (TMG- JAkm18sysMTv7M6vrscXFkJ5NvuoRX1CJ)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_graph_1 : \iota \Rightarrow o$ be given. Let $l1_graph_1 : \iota \Rightarrow o$ be given. Let $r4_graph_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_graph_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (l1_graph_1 X1)) \Rightarrow (\forall X2.((\neg v2_struct_0 \\ & X2) \wedge (l1_graph_1 X2)) \Rightarrow (((r4_graph_1 X0 X1) \wedge (r4_graph_1 X2 X1)) \Rightarrow \\ & (r4_graph_1 (k5_graph_1 X0 X2) X1)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (l1_graph_1 X1)) \Rightarrow ((\exists X2.((\neg v2_struct_0 \\ & X2) \wedge (l1_graph_1 X2)) \wedge ((r4_graph_1 X0 X2) \wedge (r4_graph_1 X1 X2))) \Rightarrow \\ & ((r4_graph_1 X0 (k5_graph_1 X0 X1)) \wedge (r4_graph_1 X1 (k5_graph_1 \\ & X0 X1)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v1_graph_1 X0) \wedge (l1_graph_1 \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v1_graph_1 X1) \wedge (l1_graph_1 \\ & X1))) \Rightarrow (((r4_graph_1 X0 X1) \wedge (r4_graph_1 X1 X0)) \Rightarrow (X0 = X1))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \wedge \\ & ((\neg v2_struct_0 X1) \wedge (l1_graph_1 X1))) \Rightarrow (r4_graph_1 X0 X0) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \wedge \\ & ((\neg v2_struct_0 X1) \wedge (l1_graph_1 X1))) \Rightarrow ((\neg v2_struct_0 (k5_graph_1 \\ & X0 X1)) \wedge ((v1_graph_1 (k5_graph_1 X0 X1)) \wedge (l1_graph_1 (k5_graph_1 \\ & X0 X1)))) \end{aligned} \tag{5}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v1_graph_1 X0) \wedge (l1_graph_1 \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v1_graph_1 X1) \wedge (l1_graph_1 \\ & X1))) \Rightarrow ((r4_graph_1 X0 X1) \Rightarrow ((k5_graph_1 X0 X1 = X1) \wedge (k5_graph_1 \\ & X1 X0 = X1)))) \end{aligned}$$