

t34_graph_1 (TM-
PCQ55DL6s4g2RZQbC8AWqpgko3oVnMMmY)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_graph_1 : \iota \Rightarrow o$ be given. Let $k11_graph_1 : \iota \Rightarrow \iota$ be given. Let $k5_graph_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_graph_1 : \iota \Rightarrow o$ be given. Let $r4_graph_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m3_graph_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge ((v1_graph_1 X1) \wedge (l1_graph_1 X1))) \Rightarrow ((X1 \in \\ & k11_graph_1 X0) \Leftrightarrow (r4_graph_1 X1 X0))) \end{aligned} \quad (1)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \wedge \\ & ((\neg v2_struct_0 X1) \wedge (l1_graph_1 X1))) \Rightarrow ((\neg v2_struct_0 (k5_graph_1 \\ & X0 X1)) \wedge ((v1_graph_1 (k5_graph_1 X0 X1)) \wedge (l1_graph_1 (k5_graph_1 \\ & X0 X1)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \Rightarrow (\forall X1. \\ & (X1 = k11_graph_1 X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow ((v1_graph_1 X2) \wedge (\\ & m3_graph_1 X2 X0)))) \end{aligned} \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (l1_graph_1 X1)) \Rightarrow (\forall X2. ((\neg v2_struct_0 \\ & X2) \wedge (l1_graph_1 X2)) \Rightarrow (((X0 \in k11_graph_1 X1) \wedge (X2 \in k11_graph_1 \\ & X1)) \Rightarrow (k5_graph_1 X0 X2 \in k11_graph_1 X1)))) \end{aligned}$$