

t24_graph_3 (TM-
NRv8Z3vkakEjmEuXoYrFT2AWYJ62g4AES)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v6_graph_1 : \iota \Rightarrow o$ 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 $k10_graph_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_graph_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Let $k6_graph_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_graph_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_graph_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_graph_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_graph_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_graph_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v6_graph_1 X0) \wedge (l1_graph_1 \\ X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k5_card_1 \\ (k6_graph_3 X0 X1) = k9_graph_1 X0 X1)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v6_graph_1 X0) \wedge (l1_graph_1 \\ X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k5_card_1 \\ (k5_graph_3 X0 X1) = k8_graph_1 X0 X1)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v6_graph_1 X0) \wedge (l1_graph_1 \\ X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ k7_graph_3 X0 X1 X2 = k2_nat_1 (k5_card_1 (k2_graph_3 X0 X1 X2)) (\\ k5_card_1 (k3_graph_3 X0 X1 X2)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k6_graph_3 X0 X1 = k3_graph_3 \\ X0 X1 (u4_struct_0 X0))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k5_graph_3 X0 X1 = k2_graph_3 \\ & X0 X1 (u4_struct_0 X0))) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v6_graph_1 X0) \wedge (l1_graph_1 \\ & X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k10_graph_1 \\ & X0 X1 = k2_nat_1 (k8_graph_1 X0 X1) (k9_graph_1 X0 X1))) \end{aligned} \tag{6}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v6_graph_1 X0) \wedge (l1_graph_1 \\ & X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k10_graph_1 \\ & X0 X1 = k7_graph_3 X0 X1 (u4_struct_0 X0))) \end{aligned}$$