

t31_graph_3

(TMQDeGw9VgtYzEoYoZ99HVqi9fFxAC7TwUJ)

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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 $k7_graph_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u4_struct_0 : \iota \Rightarrow \iota$ 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. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_card_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v2_struct_0 X1) \wedge ((v6_graph_1 X1) \wedge (l1_graph_1 X1))) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X1)) \Rightarrow \\ & ((k2_graph_3 X1 X2 X0 = k2_graph_3 X1 X2 (k3_xboole_0 X0 (u4_struct_0 X1))) \wedge (k3_graph_3 X1 X2 X0 = k3_graph_3 X1 X2 (k3_xboole_0 X0 (u4_struct_0 X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v6_graph_1 X0) \wedge (l1_graph_1 X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (k7_graph_3 X0 X1 X2 = k2_nat_1 (k5_card_1 (k2_graph_3 X0 X1 X2)) (k5_card_1 (k3_graph_3 X0 X1 X2)))) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v2_struct_0 X1) \wedge ((v6_graph_1 X1) \wedge (l1_graph_1 X1))) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X1)) \Rightarrow \\ & (k7_graph_3 X1 X2 X0 = k7_graph_3 X1 X2 (k3_xboole_0 X0 (u4_struct_0 X1)))) \end{aligned}$$