

t23_graph_3 (TM-
diD4WPTPBx6CDVGPnfTY1FjmVd6pFtKCP)

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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 $k5_card_1 : \iota \Rightarrow \iota$ 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 $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_graph_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_graph_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$k5_numbers = k4_ordinal1 \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v6_graph_1 X0) \wedge \\ (l1_graph_1 X0))) \wedge (m1_subset_1 X1 (u1_struct_0 X0))) \Rightarrow (v1_finset_1 \\ (k6_graph_3 X0 X1)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \wedge \\ (m1_subset_1 X1 (u1_struct_0 X0))) \Rightarrow (m1_subset_1 (k6_graph_3 \\ X0 X1) (k1_zfmisc_1 (u4_struct_0 X0))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0. (v1_finset_1 X0) \Rightarrow (m1_subset_1 (k5_card_1 X0) k4_ordinal1) \tag{4}$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k6_graph_3 X0 X1 = k3_graph_3 \\ X0 X1 (u4_struct_0 X0))) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \Rightarrow (\forall X1. \\
& (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \forall X3. (m1_subset_1 \\
& X3 (k1_zfmisc_1 (u4_struct_0 X0))) \Rightarrow ((X3 = k3_graph_3 X0 X1 X2) \Leftrightarrow \\
& (\forall X4. (X4 \in X3) \Leftrightarrow ((X4 \in u4_struct_0 X0) \wedge ((X4 \in X2) \wedge (k1_funct_1 \\
& (u1_graph_1 X0) X4 = X1))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v6_graph_1 X0) \wedge (l1_graph_1 \\
& X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
& (m1_subset_1 X2 k5_numbers) \Rightarrow ((X2 = k9_graph_1 X0 X1) \Leftrightarrow (\exists X3. \\
& (v1_finset_1 X3) \wedge ((\forall X4. (X4 \in X3) \Leftrightarrow ((X4 \in u4_struct_0 X0) \wedge \\
& (k1_funct_1 (u1_graph_1 X0) X4 = X1)))) \wedge (X2 = k5_card_1 X3))))))
\end{aligned} \tag{7}$$

Theorem 1

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