

t19_graph_4

(TMcXySy989SzKJM5VWz8j2Vv59dj8TdrcZk)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_graph_1 : \iota \Rightarrow o$ be given. Let $v7_graph_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_graph_4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_graph_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_graph_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r3_graph_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_graph_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \Rightarrow (\forall X1. \\ & (m2_finseq_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.((v7_graph_1 X2 \\ & X0) \wedge (m2_graph_1 X2 X0)) \Rightarrow ((r3_graph_4 X0 X1 X2) \Rightarrow (r1_graph_2 X0 \\ & X1 X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \tag{2}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{3}$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \tag{4}$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \Rightarrow (\forall X1. \\
& (m2_graph_1 X1 X0) \Rightarrow ((v3_graph_2 X1 X0) \Leftrightarrow (\exists X2.(m2_finseq_1 \\
& X2 (u1_struct_0 X0)) \wedge ((r1_graph_2 X0 X2 X1) \wedge (\forall X3.(m2_subset_1 \\
& X3 k1_numbers k5_numbers) \Rightarrow (\forall X4.(m2_subset_1 X4 k1_numbers \\
& k5_numbers) \Rightarrow (((r1_xxreal_0 np_1 X3) \wedge ((r1_xxreal_0 X4 (k3_finseq_1 \\
& X2)) \wedge (k1_funct_1 X2 X3 = k1_funct_1 X2 X4))) \Rightarrow ((r1_xxreal_0 X4 X3) \vee \\
& ((X3 = np_1) \wedge (X4 = k3_finseq_1 X2)))))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \Rightarrow (\forall X1. \\
& ((v7_graph_1 X1 X0) \wedge (m2_graph_1 X1 X0)) \Rightarrow ((v1_graph_4 X1 X0) \Leftrightarrow (\\
& \exists X2.(m2_finseq_1 X2 (u1_struct_0 X0)) \wedge ((r3_graph_4 X0 \\
& X2 X1) \wedge (\forall X3.(m1_subset_1 X3 k5_numbers) \Rightarrow (\forall X4.(\\
& m1_subset_1 X4 k5_numbers) \Rightarrow (((r1_xxreal_0 np_1 X3) \wedge ((r1_xxreal_0 \\
& X4 (k3_finseq_1 X2)) \wedge (k1_funct_1 X2 X3 = k1_funct_1 X2 X4))) \Rightarrow ((\\
& r1_xxreal_0 X4 X3) \vee ((X3 = np_1) \wedge (X4 = k3_finseq_1 X2)))))))))
\end{aligned} \tag{7}$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \tag{8}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l1_graph_1 X0)) \Rightarrow (\forall X1. \\
& ((v7_graph_1 X1 X0) \wedge ((v1_graph_4 X1 X0) \wedge (m2_graph_1 X1 X0))) \Rightarrow \\
& ((v7_graph_1 X1 X0) \wedge ((v3_graph_2 X1 X0) \wedge (m2_graph_1 X1 X0)))
\end{aligned}$$