

t48_graph_5
(TMQQbc4qxaxUNgCiEgJr8WcBy4paH4efFCe)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_graph_1 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u4_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $r6_graph_5 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_graph_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (\forall X2. ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow (\neg(r1_tarski (k10_xtuple_0 X1) (k10_xtuple_0 X2)) \wedge ((X0 \in k9_xtuple_0 X1) \wedge (\forall X3. \neg(X3 \in k9_xtuple_0 X2) \wedge (k1_funct_1 X1 X0 = k1_funct_1 X2 X3)))))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (3)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (k4_finseq_1 X0 = k9_xtuple_0 X0) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Rightarrow ((v1_funct_1 X1) \wedge ((v1_finseq_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(v1_funct_1 X1)\wedge(v1_finseq_1 X1)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge(l1_graph_1 X0))\wedge((m1_finseq_1 X1 (u4_struct_0 X0))\wedge((v1_relat_1 X2)\wedge(v1_funct_1 X2))))\Rightarrow(m2_finseq_1 (k9_graph_5 X0 X1 X2) k1_numbers) \quad (7)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow(m1_subset_1 (k4_finseq_1 X0) (k1_zfmisc_1 k5_numbers)) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge(l1_graph_1 X0))\Rightarrow(\forall X1. \\ & (m2_finseq_1 X1 (u4_struct_0 X0))\Rightarrow(\forall X2.((v1_relat_1 X2)\wedge \\ & (v1_funct_1 X2))\Rightarrow((r6_graph_5 X0 X2)\Rightarrow(\forall X3.(m2_finseq_1 \\ & X3 k1_numbers)\Rightarrow((X3 = k9_graph_5 X0 X1 X2)\Leftrightarrow((k4_finseq_1 X1 = k4_finseq_1 \\ & X3)\wedge(\forall X4.(m1_subset_1 X4 k5_numbers)\Rightarrow((X4 \in k4_finseq_1 \\ & X1)\Rightarrow(k1_seq_1 X3 X4 = k1_funct_1 X2 (k1_funct_1 X1 X4)))))))))) \quad (9) \end{aligned}$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers)\Rightarrow(\forall X1.((v1_relat_1 \\ & X1)\wedge(v1_funct_1 X1))\Rightarrow(\forall X2.((\neg v2_struct_0 X2)\wedge(l1_graph_1 \\ & X2))\Rightarrow(\forall X3.(m2_finseq_1 X3 (u4_struct_0 X2))\Rightarrow(\forall X4. \\ & (m2_finseq_1 X4 (u4_struct_0 X2))\Rightarrow(\neg(r1_tarski (k10_xtuple_0 \\ & X3) (k10_xtuple_0 X4))\wedge((r6_graph_5 X2 X1)\wedge((X0 \in k4_finseq_1 \\ & X3)\wedge(\forall X5.(m1_subset_1 X5 k5_numbers)\Rightarrow(\neg(X5 \in k4_finseq_1 \\ & X4)\wedge(k1_seq_1 (k9_graph_5 X2 X4 X1) X5 = k1_seq_1 (k9_graph_5 X2 \\ & X3 X1) X0)))))))))) \end{aligned}$$