

t14_graph_3 (TMW-
tUMB2HKuYys9tbenJmC95F42iKLKKFVq)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_graph_1 : \iota \Rightarrow o$ be given. Let $m1_graph_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_graph_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2_graph_1 : \iota \Rightarrow \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $u1_graph_1 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ & (\forall X1.(v7_ordinal1 X1) \Rightarrow ((X1 \in k1_relset_1 k5_numbers X0) \Leftrightarrow \\ & ((r1_xxreal_0 np_1 X1) \wedge (r1_xxreal_0 X1 (k3_finseq_1 X0)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (2)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ & (k4_finseq_1 X0 = k9_xtuple_0 X0) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1.((m1_subset_1 X0 k5_numbers) \wedge (v7_ordinal1 \\ & X1)) \Rightarrow (k2_nat_1 X0 X1 = k2_xcmplx_0 X0 X1) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v4_relat_1 X1 X0))\Rightarrow(k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0)\wedge(m1_subset_1 X1 k5_numbers))\Rightarrow(k1_nat_1 X0 X1 = k2_xcmplx_0 X0 X1) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge(l1_graph_1 X0))\Rightarrow(\forall X1. \\ & (m1_graph_1 X1 X0)\Rightarrow(\forall X2.(m2_finseq_1 X2 (u1_struct_0 X0))\Rightarrow \\ & ((r1_graph_2 X0 X2 X1)\Rightarrow(\forall X3.(v7_ordinal1 X3)\Rightarrow(((r1_xxreal_0 \\ & np_1 X3)\wedge(r1_xxreal_0 X3 (k3_finseq_1 X1)))\Rightarrow((r1_xxreal_0 np_1 \\ & X3)\wedge((r1_xxreal_0 X3 (k3_finseq_1 X2))\wedge((r1_xxreal_0 np_1 (\\ & k1_nat_1 X3 np_1))\wedge((r1_xxreal_0 (k1_nat_1 X3 np_1) (k3_finseq_1 \\ & X2))\wedge(((k1_funct_1 X2 X3 = k1_funct_1 (u2_graph_1 X0) (k1_funct_1 \\ & X1 X3))\wedge(k1_funct_1 X2 (k1_nat_1 X3 np_1) = k1_funct_1 (u1_graph_1 \\ & X0) (k1_funct_1 X1 X3)))\vee((k1_funct_1 X2 X3 = k1_funct_1 (u1_graph_1 \\ & X0) (k1_funct_1 X1 X3))\wedge(k1_funct_1 X2 (k1_nat_1 X3 np_1) = k1_funct_1 \\ & (u2_graph_1 X0) (k1_funct_1 X1 X3)))))))))) \quad (8) \end{aligned}$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_graph_1 X0))\Rightarrow(\forall X1. (m1_graph_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 X1)))) \quad (9)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (10)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow((v1_relat_1 X0)\wedge((v4_relat_1 X0 k5_numbers)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))) \quad (11)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge(l1_graph_1 X0))\Rightarrow(\forall X1. \\ & (m1_graph_1 X1 X0)\Rightarrow(\forall X2.(m2_finseq_1 X2 (u1_struct_0 X0))\Rightarrow \\ & ((r1_graph_2 X0 X2 X1)\Rightarrow(\forall X3.(m1_subset_1 X3 k5_numbers)\Rightarrow \\ & (\neg(X3 \in k4_finseq_1 X1)\wedge(\neg(k1_funct_1 X2 X3 = k1_funct_1 (u2_graph_1 \\ & X0) (k1_funct_1 X1 X3))\wedge(k1_funct_1 X2 (k2_nat_1 X3 np_1) = k1_funct_1 \\ & (u1_graph_1 X0) (k1_funct_1 X1 X3)))\wedge(\neg(k1_funct_1 X2 X3 = k1_funct_1 \\ & (u1_graph_1 X0) (k1_funct_1 X1 X3))\wedge(k1_funct_1 X2 (k2_nat_1 X3 \\ & np_1) = k1_funct_1 (u2_graph_1 X0) (k1_funct_1 X1 X3)))))))) \end{aligned}$$