

t55_graph_2

(TMUC54uqkPXCpDBk3wRvzTUsbkiPC3X62kB)

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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 $k3_graph_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $k7_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $np_2 : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Let $k1_graph_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \Rightarrow ((v1_xboole_0 X0) \vee ((v2_xxreal_0 X1) \vee (v3_xxreal_0 X0)))))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (2)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow ((k7_finseq_1 X0 k1_xboole_0 = X0) \wedge (k7_finseq_1 k1_xboole_0 X0 = X0)) \quad (3)$$

Assume the following.

$$m1_subset_1 k1_xboole_0 k4_ordinal1 \quad (4)$$

Assume the following.

$$((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \quad (5)$$

Assume the following.

$$\neg v1_xboole_0 \ np_2 \tag{6}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{7}$$

Assume the following.

$$\forall X0.((v1_relat_1 \ X0) \wedge ((v1_funct_1 \ X0) \wedge (v1_finseq_1 \ X0))) \Rightarrow (k3_finseq_1 \ X0 = k1_card_1 \ X0) \tag{8}$$

Assume the following.

$$\exists X0.(v1_xboole_0 \ X0) \wedge (v1_xxreal_0 \ X0) \tag{9}$$

Assume the following.

$$v6_membered \ k4_ordinal1 \tag{10}$$

Assume the following.

$$v3_membered \ k1_numbers \tag{11}$$

Assume the following.

$$\forall X0.(v1_xboole_0 \ X0) \Rightarrow ((v1_xboole_0 \ (k1_card_1 \ X0)) \wedge (v1_card_1 \ (k1_card_1 \ X0))) \tag{12}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 \ X0) \wedge ((v1_funct_1 \ X0) \wedge (v1_finseq_1 \ X0))) \Rightarrow \\ & (\forall X1.((v1_relat_1 \ X1) \wedge ((v1_funct_1 \ X1) \wedge (v1_finseq_1 \ X1)))) \Rightarrow (k3_graph_2 \ X0 \ X1 = k7_finseq_1 \ X0 \ (k1_graph_2 \ X1 \ np_2 \ (k3_finseq_1 \ X1)))) \tag{13} \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 \ X0) \wedge ((v1_funct_1 \ X0) \wedge (v1_finseq_1 \ X0))) \Rightarrow \\ & (\forall X1.(v7_ordinal1 \ X1) \Rightarrow (\forall X2.(v7_ordinal1 \ X2) \Rightarrow (\forall X3.((v1_relat_1 \ X3) \wedge ((v1_funct_1 \ X3) \wedge (v1_finseq_1 \ X3)))) \Rightarrow \\ & (((r1_xxreal_0 \ np_1 \ X1) \wedge ((r1_xxreal_0 \ X1 \ X2) \wedge (r1_xxreal_0 \ X2 \ (k3_finseq_1 \ X0)))) \Rightarrow ((X3 = k1_graph_2 \ X0 \ X1 \ X2) \Leftrightarrow ((k2_nat_1 \ (k3_finseq_1 \ X3) \ X1 = k1_nat_1 \ X2 \ np_1) \wedge (\forall X4.(v7_ordinal1 \ X4) \Rightarrow ((\neg r1_xxreal_0 \ (k3_finseq_1 \ X3) \ X4) \Rightarrow (k1_funct_1 \ X3 \ (k1_nat_1 \ X4 \ np_1) = k1_funct_1 \ X0 \ (k2_xcmplx_0 \ X1 \ X4)))))) \wedge ((\neg (r1_xxreal_0 \ np_1 \ X1) \wedge ((r1_xxreal_0 \ X1 \ X2) \wedge (r1_xxreal_0 \ X2 \ (k3_finseq_1 \ X0)))) \Rightarrow ((X3 = k1_graph_2 \ X0 \ X1 \ X2) \Leftrightarrow (X3 = k1_xboole_0)))))) \tag{14} \end{aligned}$$

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(v2_membered\ X0) \quad (15)$$

Assume the following.

$$\forall X0.((v1_xreal_0\ X0)\wedge(v2_xreal_0\ X0))\Rightarrow((\neg v1_xboole_0\ X0)\wedge((v1_xreal_0\ X0)\wedge(\neg v3_xreal_0\ X0))) \quad (16)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(v1_xreal_0\ X0) \quad (17)$$

Assume the following.

$$\forall X0.(v1_xboole_0\ X0)\Rightarrow(v1_relat_1\ X0) \quad (18)$$

Assume the following.

$$\forall X0.(v1_xboole_0\ X0)\Rightarrow(v1_funct_1\ X0) \quad (19)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge(v1_xboole_0\ X0))\Rightarrow((v1_relat_1\ X0)\wedge(v1_finseq_1\ X0)) \quad (20)$$

Assume the following.

$$\forall X0.(v6_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v7_ordinal1\ X1)) \quad (21)$$

Assume the following.

$$\forall X0.(v2_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v1_xreal_0\ X1)) \quad (22)$$

Theorem 1

$$\forall X0.((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge(v1_finseq_1\ X0)))\Rightarrow(k3_graph_2\ X0\ k1_xboole_0 = X0)$$