

t45_graphsp
(TMdXThK2SPuAVb6svYAhbipas1tyRndZypG)

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Let $m2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k9_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_graphsp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_graphsp : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_graphsp : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_graphsp : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ 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 $m1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k13_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X1) \wedge (m1_funct_2 X2 X0 X1)) \Rightarrow (\forall X3. (m2_funct_2 X3 X0 X1 X2) \Leftrightarrow (m1_subset_1 X3 X2)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_finseq_2 X1 X0) \Rightarrow (\forall X2. (m2_finseq_2 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (3)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (4)$$

Assume the following.

$$\forall X0. k3_finseq_2 X0 = k13_finseq_1 X0 \quad (5)$$

Assume the following.

$$(\neg v1_xboole_0 \ k4_ordinal1) \wedge (v3_ordinal1 \ k4_ordinal1) \quad (6)$$

Assume the following.

$$\neg v1_xboole_0 \ k1_numbers \quad (7)$$

Assume the following.

$$\forall X0. \neg v1_xboole_0 \ (k13_finseq_1 \ X0) \quad (8)$$

Assume the following.

$$\forall X0. \forall X1. (\neg v1_xboole_0 \ X1) \Rightarrow (m1_funct_2 \ (k9_funct_2 \ X0 \ X1) \ X0 \ X1) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((m1_subset_1 \ X0 \ (k9_funct_2 \\ & (k3_finseq_2 \ k1_numbers) \ (k3_finseq_2 \ k1_numbers))) \wedge ((m1_subset_1 \\ & X1 \ (k3_finseq_2 \ k1_numbers)) \wedge (v7_ordinal1 \ X2))) \Rightarrow (m2_subset_1 \\ & (k8_graphsp \ X0 \ X1 \ X2) \ k1_numbers \ k5_numbers) \end{aligned} \quad (10)$$

Assume the following.

$$m1_subset_1 \ k5_numbers \ (k1_zfmisc_1 \ k1_numbers) \quad (11)$$

Assume the following.

$$\forall X0. m1_finseq_2 \ (k3_finseq_2 \ X0) \ X0 \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m2_funct_2 \ X0 \ (k3_finseq_2 \ k1_numbers) \ (k3_finseq_2 \\ & k1_numbers) \ (k9_funct_2 \ (k3_finseq_2 \ k1_numbers) \ (k3_finseq_2 \\ & k1_numbers))) \Rightarrow (\forall X1. (m2_finseq_2 \ X1 \ k1_numbers \ (k3_finseq_2 \\ & k1_numbers)) \Rightarrow (\forall X2. (v7_ordinal1 \ X2) \Rightarrow ((\exists X3. (m2_subset_1 \\ & X3 \ k1_numbers \ k5_numbers) \wedge (k7_graphsp \ (k6_graphsp \ (k8_nat_1 \\ & (k1_funct_2 \ (k3_finseq_2 \ k1_numbers) \ (k3_finseq_2 \ k1_numbers)) \\ & (k5_graphsp \ (k3_finseq_2 \ k1_numbers) \ X0) \ X3) \ X1) \ X2 = k1_xboole_0)) \Rightarrow \\ & (\forall X3. (m2_subset_1 \ X3 \ k1_numbers \ k5_numbers) \Rightarrow ((X3 = k8_graphsp \\ & X0 \ X1 \ X2) \Leftrightarrow ((k7_graphsp \ (k6_graphsp \ (k8_nat_1 \ (k1_funct_2 \ (k3_finseq_2 \\ & k1_numbers) \ (k3_finseq_2 \ k1_numbers)) \ (k5_graphsp \ (k3_finseq_2 \\ & k1_numbers) \ X0) \ X3) \ X1) \ X2 = k1_xboole_0) \wedge (\forall X4. (v7_ordinal1 \\ & X4) \Rightarrow ((k7_graphsp \ (k6_graphsp \ (k8_nat_1 \ (k1_funct_2 \ (k3_finseq_2 \\ & k1_numbers) \ (k3_finseq_2 \ k1_numbers)) \ (k5_graphsp \ (k3_finseq_2 \\ & k1_numbers) \ X0) \ X4) \ X1) \ X2 = k1_xboole_0) \Rightarrow (r1_xreal_0 \ X3 \ X4)))))))))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k4_ordinal1) \Rightarrow (v7_ordinal1 \ X0) \quad (14)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m2_funct_2 X0 (k3_finseq_2 k1_numbers) (k3_finseq_2 \\ & k1_numbers) (k9_funct_2 (k3_finseq_2 k1_numbers) (k3_finseq_2 \\ & k1_numbers))) \Rightarrow (\forall X1.(m2_finseq_2 X1 k1_numbers (k3_finseq_2 \\ & k1_numbers)) \Rightarrow (\forall X2.(m2_subset_1 X2 k1_numbers k5_numbers) \Rightarrow \\ & (\forall X3.(m2_subset_1 X3 k1_numbers k5_numbers) \Rightarrow (\neg(\neg r1_xreal_0 \\ & (k8_graphsp X0 X1 X2) X3) \wedge (k7_graphsp (k6_graphsp (k8_nat_1 (k1_funct_2 \\ & (k3_finseq_2 k1_numbers) (k3_finseq_2 k1_numbers)) (k5_graphsp \\ & (k3_finseq_2 k1_numbers) X0) X3) X1) X2 = k1_xboole_0)))))) \end{aligned}$$