

t31_topreal8 (TMWYwpm- RRP2EpCLoHAt5dUQ15yW2TNH47bA)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $v1_zfmisc_1 : \iota \Rightarrow o$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_graph_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ 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 $np_0 : \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. \neg (X0 \in X1) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 X2)) \wedge (v1_xboole_0 X2)) \quad (1)$$

Assume the following.

$$\forall X0. ((\neg v1_xboole_0 X0) \wedge (m2_finseq_1 X0 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (\forall X1. ((\neg v1_zfmisc_1 X1) \wedge (m2_finseq_1 X1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow ((k7_partfun1 (u1_struct_0 (k15_euclid np_2)) X0 (k3_finseq_1 X0) = k7_partfun1 (u1_struct_0 (k15_euclid np_2)) X1 np_1) \Rightarrow (k2_topreal1 np_2 (k4_graph_2 (u1_struct_0 (k15_euclid np_2)) X0 X1) (k3_finseq_1 X0) = k2_topreal1 np_2 X1 np_1))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.((\neg v1_xboole_0 \\ X1) \wedge (m2_finseq_1 X1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (\forall X2. \\ ((\neg v1_xboole_0 X2) \wedge (m2_finseq_1 X2 (u1_struct_0 (k15_euclid \\ np_2)))) \Rightarrow ((r1_xxreal_0 np_1 X0) \Rightarrow ((r1_xxreal_0 (k3_finseq_1 \\ X2) (k2_nat_1 X0 np_1)) \vee (k2_topreal1 np_2 (k4_graph_2 (u1_struct_0 \\ (k15_euclid np_2)) X1 X2) (k2_nat_1 (k3_finseq_1 X1) X0) = k2_topreal1 \\ np_2 X2 (k2_nat_1 X0 np_1)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k2_xcmplx_0 X0 k6_numbers = X0) \quad (5)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow ((\neg r1_xxreal_0 np_1 X0) \Rightarrow (X0 = k6_numbers)) \quad (6)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (7)$$

Assume the following.

$$(m2_subset_1 np_0 k1_numbers k5_numbers) \wedge ((m1_subset_1 np_0 k5_numbers) \wedge (m1_subset_1 np_0 k1_numbers)) \quad (8)$$

Assume the following.

$$k2_xcmplx_0 np_0 np_1 = np_1 \quad (9)$$

Assume the following.

$$\neg r1_xxreal_0 np_1 np_0 \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (12)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (13)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k5_numbers)\wedge(v7_ordinal1 X1))\Rightarrow(k2_nat_1 X0 X1 = k2_xcmplx_0 X0 X1) \quad (15)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 X0))))\Rightarrow(\forall X2.(m2_subset_1 X2 X0 X1)\Rightarrow(m1_subset_1 X2 X0)) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge((v1_finseq_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))))) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 X1))) \quad (19)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (20)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow(m2_subset_1 (k3_finseq_1 X0) k1_numbers k5_numbers) \quad (21)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (22)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xcmplx_0 X0) \quad (23)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(v1_zfmisc_1 X0) \quad (24)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xreal_0 X0) \quad (25)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.((\neg v1_xboole_0 \\ & X1) \wedge (m2_finseq_1 X1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (\forall X2. \\ & ((\neg v1_zfmisc_1 X2) \wedge (m2_finseq_1 X2 (u1_struct_0 (k15_euclid \\ & np_2)))) \Rightarrow ((k7_partfun1 (u1_struct_0 (k15_euclid np_2)) X1 \\ & (k3_finseq_1 X1) = k7_partfun1 (u1_struct_0 (k15_euclid np_2)) \\ & X2 np_1) \Rightarrow ((r1_xxreal_0 (k3_finseq_1 X2) (k2_nat_1 X0 np_1)) \vee \\ & (k2_topreal1 np_2 (k4_graph_2 (u1_struct_0 (k15_euclid np_2)) \\ & X1 X2) (k2_nat_1 (k3_finseq_1 X1) X0) = k2_topreal1 np_2 X2 (k2_nat_1 \\ & X0 np_1)))))) \end{aligned}$$