

t2_sprect_4
(TMHM6fTAffqsk8xdRDWPe5c37TQwTMQAtgw)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_topreal1 : \iota \Rightarrow o$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k3_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_jordan3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ 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 $k9_finseq_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $v2_topreal1 : \iota \Rightarrow o$ be given. Let $v3_topreal1 : \iota \Rightarrow o$ be given. Let $v1_topreal1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_membered : \iota \Rightarrow o$ 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.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \Rightarrow ((X1 = k9_finseq_1 X0) \Leftrightarrow ((k3_finseq_1 X1 = np_1) \wedge (k10_xtuple_0 X1 = k1_tarski X0))) \quad (2)$$

Assume the following.

$$\forall X0. (v1_xxreal_0 X0) \Rightarrow (\forall X1. (v1_xxreal_0 X1) \Rightarrow (\forall X2. (v1_xxreal_0 X2) \Rightarrow (((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X2)) \Rightarrow (r1_xxreal_0 X0 X2)))) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1)\Rightarrow((v1_xboole_0 X1)\vee (X0 \in X1)) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finseq_1 X0)))\Rightarrow \\ (\forall X1.(v7_ordinal_1 X1)\Rightarrow((X1 \in k1_relset_1 k5_numbers X0)\Leftrightarrow \\ ((r1_xxreal_0 np_1 X1)\wedge(r1_xxreal_0 X1 (k3_finseq_1 X0)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal_1 X0)\Rightarrow(\forall X1.(m2_finseq_1 X1 (u1_struct_0 \\ (k15_euclid X0)))\Rightarrow(((k3_finseq_1 X1 = k6_numbers)\vee(k3_finseq_1 \\ X1 = np_1))\Leftrightarrow(k3_topreal_1 X0 X1 = k1_xboole_0))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(m2_finseq_1 X0 (u1_struct_0 (k15_euclid np_2)))\Rightarrow \\ (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2)))\Rightarrow \\ (((v4_topreal_1 X0)\wedge(X1 = k1_funct_1 X0 (k3_finseq_1 X0)))\Rightarrow(k2_jordan3 \\ X0 X1 = k12_finseq_1 (u1_struct_0 (k15_euclid np_2)) X1))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 np_2)\wedge(m2_subset_1 np_2 k1_numbers k5_numbers))\wedge \\ ((m1_subset_1 np_2 k5_numbers)\wedge(m1_subset_1 np_2 k1_numbers)) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 np_1)\wedge(m2_subset_1 np_1 k1_numbers k5_numbers))\wedge \\ ((m1_subset_1 np_1 k5_numbers)\wedge(m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (9)$$

Assume the following.

$$\neg r1_xxreal_0 np_2 np_1 \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow(r1_xxreal_0 X0 X0) \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 X0))))\Rightarrow(\forall X2.(m2_subset_1 \\ X2 X0 X1)\Leftrightarrow(m1_subset_1 X2 X1)) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Leftrightarrow(m1_finseq_1 X1 X0) \quad (13)$$

Assume the following.

$$\forall X0. k9_finseq_1 X0 = k5_finseq_1 X0 \quad (14)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (15)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (16)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow (k12_finseq_1 X0 X1 = k5_finseq_1 X1) \quad (17)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (18)$$

Assume the following.

$$v3_membered k1_numbers \quad (19)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Rightarrow ((v1_funct_1 X1) \wedge ((v1_finseq_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))))) \quad (20)$$

Assume the following.

$$\forall X0. \forall X1. (m1_finseq_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \quad (21)$$

Assume the following.

$$\forall X0. (v1_relat_1 (k9_finseq_1 X0)) \wedge (v1_funct_1 (k9_finseq_1 X0)) \quad (22)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (23)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (m2_subset_1 (k3_finseq_1 X0) k1_numbers k5_numbers) \quad (24)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((m1_finseq_1 X0 (u1_struct_0 (k15_euclid \\ & \quad np_2))) \wedge (m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow \\ & (m2_finseq_1 (k2_jordan3 X0 X1) (u1_struct_0 (k15_euclid np_2))) \end{aligned} \quad (25)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m2_finseq_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & ((v4_topreal1 X0) \Leftrightarrow ((v2_funct_1 X0) \wedge ((r1_xxreal_0 np_2 (k3_finseq_1 \\ & \quad X0)) \wedge ((v2_topreal1 X0) \wedge ((v3_topreal1 X0) \wedge (v1_topreal1 X0))))) \end{aligned} \quad (26)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v5_relat_1 X1 X0) \wedge (\\ & \quad v1_funct_1 X1))) \Rightarrow (\forall X2. (X2 \in k9_xtuple_0 X1) \Rightarrow (k7_partfun1 \\ & \quad X0 X1 X2 = k1_funct_1 X1 X2)) \end{aligned} \quad (27)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (\\ & \quad (r1_xxreal_0 X0 X1) \vee (r1_xxreal_0 X1 X0)) \end{aligned} \quad (28)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (v1_xboole_0 X0) \Rightarrow (\forall X2. (m1_subset_1 \\ & \quad X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 X0))) \Rightarrow (v1_xboole_0 X2)) \end{aligned} \quad (29)$$

Assume the following.

$$\forall X0. (v3_membered X0) \Rightarrow (v2_membered X0) \quad (30)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (v1_xboole_0 X0) \Rightarrow (\forall X2. (m1_subset_1 \\ & \quad X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_xboole_0 X2)) \end{aligned} \quad (31)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ & \quad (k2_zfmisc_1 X0 X1))) \Rightarrow ((v4_relat_1 X2 X0) \wedge (v5_relat_1 X2 X1)) \end{aligned} \quad (32)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v2_membered X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 \\ & \quad X0)) \Rightarrow (v2_membered X1)) \end{aligned} \quad (33)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v6_membered X0) \Rightarrow (\forall X1. (m1_subset_1 X1 X0) \Rightarrow \\ & \quad (v7_ordinal1 X1)) \end{aligned} \quad (34)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v2_membered X0) \Rightarrow (\forall X1. (m1_subset_1 X1 X0) \Rightarrow \\ & \quad (v1_xxreal_0 X1)) \end{aligned} \quad (35)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge (m2_finseq_1 X0 (u1_struct_0 (\\ & \quad k15_euclid np_2)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & (k15_euclid np_2))) \Rightarrow (((v4_topreal1 X0) \wedge (X1 = k7_partfun1 (u1_struct_0 \\ & (k15_euclid np_2) X0 (k3_finseq_1 X0))) \Rightarrow (k3_topreal1 np_2 \\ & \quad (k2_jordan3 X0 X1) = k1_xboole_0))) \end{aligned}$$