

t1_jordan22

(TMR5WGcpBWvyZR9paUasV1hzGsGw7aTJpay)

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Let $v1_topreal2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_setfam_1 : \iota \Rightarrow \iota$ be given. Let $k1_jordan19 : \iota \Rightarrow \iota$ be given. Let $k2_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_goboard9 : \iota \Rightarrow \iota$ be given. Let $k1_jordan9 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k9_jordan6 : \iota \Rightarrow \iota$ be given. Let $k8_jordan6 : \iota \Rightarrow \iota$ be given. Let $v2_compts_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_sppol_1 : \iota \Rightarrow o$ be given. Let $v2_sppol_1 : \iota \Rightarrow o$ be given. Let $v2_connsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v3_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_topreal1 : \iota \Rightarrow o$ be given. Let $v2_topreal1 : \iota \Rightarrow o$ be given. Let $v1_goboard5 : \iota \Rightarrow o$ be given. Let $v2_goboard5 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_sprect_2 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(\neg r1_xxreal_0 X0 X1) \wedge ((\neg v3_xxreal_0 X1) \wedge (\neg v2_xxreal_0 X0)))) \quad (1)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0) \wedge ((v1_topreal2 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow ((r1_tarski (k9_jordan6 X0) X0) \wedge (r1_tarski (k8_jordan6 X0) X0)) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ & (m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow (\forall X2. ((v2_compts_1 \\ & X2 (k15_euclid np_2)) \wedge ((\neg v1_sppol_1 X2) \wedge ((\neg v2_sppol_1 X2) \wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow (3) \\ & (((v2_connsp_1 X2 (k15_euclid np_2)) \wedge (r1_xxreal_0 X0 X1)) \Rightarrow (\\ & r1_tarski (k3_topreal1 np_2 (k1_jordan9 X2 X1)) (k2_pre_topc \\ & (k15_euclid np_2) (k3_goboard9 (k1_jordan9 X2 X0)))))) \end{aligned}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1_tarski X0 X1) \wedge (r1_tarski X1 X2)) \Rightarrow (r1_tarski X0 X2) \quad (4)$$

Assume the following.

$$m1_subset_1 k1_xboole_0 k4_ordinal1 \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (8)$$

Assume the following.

$$\forall X0. k9_setfam_1 X0 = k1_zfmisc_1 X0 \quad (9)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (10)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\ & (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))))) \wedge (m1_subset_1 X3 X0))) \Rightarrow (k3_funct_2 X0 \\ & X1 X2 X3 = k1_funct_1 X2 X3) \end{aligned} \quad (12)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v1_xboole_0 X0) \wedge ((\neg v3_funct_1 X0) \wedge ((v1_finseq_6 \\ X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m1_finseq_1 X0 (u1_struct_0 \\ (k15_euclid np_2)))))))))) \Rightarrow (v1_topreal2 (k3_topreal1 np_2 \\ X0)) \end{aligned} \quad (14)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (15)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ X2 X0 X1) \Rightarrow (m1_subset_1 X2 X0)) \end{aligned} \quad (17)$$

Assume the following.

$$m2_subset_1 k6_numbers k1_numbers k5_numbers \quad (18)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (19)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((v7_ordinal1 X0) \wedge (m1_finseq_1 X1 (u1_struct_0 \\ (k15_euclid X0)))) \Rightarrow (m1_subset_1 (k3_topreal1 X0 X1) (k1_zfmisc_1 \\ (u1_struct_0 (k15_euclid X0)))) \end{aligned} \quad (20)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((\neg v1_xboole_0 X0) \wedge ((v2_compts_1 X0 (\\ k15_euclid np_2)) \wedge ((\neg v1_sppol_1 X0) \wedge ((\neg v2_sppol_1 X0) \wedge (m1_subset_1 \\ X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))))))))) \wedge (v7_ordinal1 \\ X1) \Rightarrow ((\neg v1_xboole_0 (k1_jordan9 X0 X1)) \wedge ((\neg v3_funct_1 (k1_jordan9 \\ X0 X1)) \wedge ((v1_finseq_6 (k1_jordan9 X0 X1) (u1_struct_0 (k15_euclid \\ np_2))) \wedge ((v1_topreal1 (k1_jordan9 X0 X1)) \wedge ((v2_topreal1 (k1_jordan9 \\ X0 X1)) \wedge ((v1_goboard5 (k1_jordan9 X0 X1)) \wedge ((v2_goboard5 (k1_jordan9 \\ X0 X1)) \wedge ((v1_sprect_2 (k1_jordan9 X0 X1)) \wedge (m2_finseq_1 (k1_jordan9 \\ X0 X1) (u1_struct_0 (k15_euclid np_2)))))))))) \end{aligned} \quad (21)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_topreal2\ X0)\wedge(m1_subset_1\ X0\ (k1_zfmisc_1\ (u1_struct_0 \\ (k15_euclid\ np_2))))))\Rightarrow((v1_funct_1\ (k1_jordan19\ X0))\wedge((v1_funct_2 \\ (k1_jordan19\ X0)\ k5_numbers\ (k9_setfam_1\ (u1_struct_0\ (k15_euclid \\ np_2))))\wedge(m1_subset_1\ (k1_jordan19\ X0)\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ k5_numbers\ (k9_setfam_1\ (u1_struct_0\ (k15_euclid\ np_2)))))))))) \end{aligned} \quad (22)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_topreal2\ X0)\wedge(m1_subset_1\ X0\ (k1_zfmisc_1\ (u1_struct_0 \\ (k15_euclid\ np_2))))))\Rightarrow(\forall X1.((v1_funct_1\ X1)\wedge((v1_funct_2 \\ X1\ k5_numbers\ (k9_setfam_1\ (u1_struct_0\ (k15_euclid\ np_2))))\wedge \\ (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ k5_numbers\ (k9_setfam_1 \\ (u1_struct_0\ (k15_euclid\ np_2))))))))))\Rightarrow((X1 = k1_jordan19\ X0)\Leftrightarrow \\ (\forall X2.(m1_subset_1\ X2\ k5_numbers)\Rightarrow(k1_funct_1\ X1\ X2 = k8_jordan6 \\ (k3_topreal1\ np_2\ (k1_jordan9\ X0\ X2)))))) \end{aligned} \quad (23)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ (k1_zfmisc_1\ (u1_struct_0\ (k15_euclid\ np_2))))\Rightarrow((v1_topreal2\ X0)\Rightarrow(v2_connsp_1\ X0\ (k15_euclid\ np_2))) \quad (24)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k4_ordinal1)\Rightarrow(v7_ordinal1\ X0) \quad (25)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ (k1_zfmisc_1\ k1_numbers))\Rightarrow(v3_membered\ X0) \quad (26)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ (k1_zfmisc_1\ (u1_struct_0\ (k15_euclid\ np_2))))\Rightarrow((v1_xboole_0\ X0)\Rightarrow(v2_sppol_1\ X0)) \quad (27)$$

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(v2_membered\ X0) \quad (28)$$

Assume the following.

$$\forall X0.((v1_xxreal_0\ X0)\wedge(v2_xxreal_0\ X0))\Rightarrow((\neg v1_xboole_0\ X0)\wedge((v1_xxreal_0\ X0)\wedge(\neg v3_xxreal_0\ X0))) \quad (29)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k5_numbers)\Rightarrow(\neg v3_xxreal_0\ X0) \quad (30)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (31)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow ((v1_topreal2 X0) \Rightarrow ((v1_topreal2 X0) \wedge ((\neg v1_sppol_1 X0) \wedge (\neg v2_sppol_1 X0)))) \quad (32)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow ((v1_topreal2 X0) \Rightarrow ((\neg v1_xboole_0 X0) \wedge (v2_compts_1 X0 (k15_euclid np_2)))) \quad (33)$$

Assume the following.

$$\forall X0.(v3_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v1_xreal_0 X1)) \quad (34)$$

Assume the following.

$$\forall X0.(v2_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v1_xreal_0 X1)) \quad (35)$$

Theorem 1

$$\forall X0.((v1_topreal2 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow (\forall X1.(m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow (r1_tarski (k3_funct_2 k5_numbers (k9_setfam_1 (u1_struct_0 (k15_euclid np_2))) (k1_jordan19 X0) X1) (k2_pre_topc (k15_euclid np_2) (k3_goboard9 (k1_jordan9 X0 k6_numbers))))))$$