

t10_jordan6
(TMK2oTZR3TRr99V2xuKNonDDw2Yu7Qv7aRP)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ 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 $r1_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_connsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ 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 $v5_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_connsp_1 : \iota \Rightarrow o$ be given. Let $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k17_borsuk_1 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k7_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k5_topmetr : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $v5_rlvect_1 : \iota \Rightarrow o$ be given. Let $v6_rlvect_1 : \iota \Rightarrow o$ be given. Let $v7_rlvect_1 : \iota \Rightarrow o$ be given. Let $v8_rlvect_1 : \iota \Rightarrow o$ be given. Let $v5_rltopsp1 : \iota \Rightarrow o$ be given. Let $k1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_rltopsp1 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v3_tops_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $k2_tops_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (v1_xboole_0 X1) \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v2_pre_topc X1) \wedge (l1_pre_topc \\ & X1))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 \\ & X0) (u1_struct_0 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow (\forall X3.(m1_subset_1 \\ & X3 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (((v5_pre_topc X2 X0 X1) \wedge (\\ & v2_connsp_1 X3 X0)) \Rightarrow (v2_connsp_1 (k7_relset_1 (u1_struct_0 X0) \\ & (u1_struct_0 X1) X2 X3) X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow ((v2_connsp_1 (k2_struct_0 X0) X0) \Leftrightarrow (v1_connsp_1 X0)) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ & (m1_pre_topc X1 X0) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (u1_struct_0 X0))) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 \\ & (u1_struct_0 X1))) \Rightarrow ((X2 = X3) \Rightarrow ((v2_connsp_1 X2 X0) \Leftrightarrow (v2_connsp_1 \\ & X3 X1)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\ & (u1_struct_0 X0)) \Rightarrow ((r1_topreal1 X0 X2 X3 X1) \Rightarrow ((X2 \in X1) \wedge (X3 \in X1)))))) \end{aligned} \quad (5)$$

Assume the following.

$$v1_connsp_1 k17_borsuk_1 \quad (6)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (k7_relat_1 X0 (k9_xtuple_0 X0) = k10_xtuple_0 X0) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (m1_subset_1 X2 (\\ & k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (k7_relset_1 X0 X1 X2 X3 = k7_relat_1 \\ & X2 X3) \end{aligned} \quad (8)$$

Assume the following.

$$k5_topmetr = k17_borsuk_1 \quad (9)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v5_relat_1 X1 X0))\Rightarrow(\quad (11)$$

$$k2_relset_1 X0 X1 = k10_xtuple_0 X1)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v4_relat_1 X1 X0))\Rightarrow(\quad (12)$$

$$k1_relset_1 X0 X1 = k9_xtuple_0 X1)$$

Assume the following.

$$(\neg v2_struct_0 k17_borsuk_1)\wedge((v1_pre_topc k17_borsuk_1)\wedge(\quad (13)$$

$$v2_pre_topc k17_borsuk_1))$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (14)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(((v2_pre_topc (k15_euclid X0))\wedge \quad (15)$$

$$((v13_algstr_0 (k15_euclid X0))\wedge((v2_rlvect_1 (k15_euclid X0))\wedge$$

$$((v3_rlvect_1 (k15_euclid X0))\wedge((v4_rlvect_1 (k15_euclid X0))\wedge$$

$$((v5_rlvect_1 (k15_euclid X0))\wedge((v6_rlvect_1 (k15_euclid X0))\wedge$$

$$((v7_rlvect_1 (k15_euclid X0))\wedge((v8_rlvect_1 (k15_euclid X0))\wedge$$

$$(v5_rltopsp1 (k15_euclid X0))))))))))$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow((\neg v2_struct_0 (k15_euclid X0))\wedge \quad (16)$$

$$(v5_rltopsp1 (k15_euclid X0)))$$

Assume the following.

$$\forall X0.\forall X1.(((v2_pre_topc X0)\wedge(l1_pre_topc X0))\wedge \quad (17)$$

$$(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))))\Rightarrow((v1_pre_topc$$

$$(k1_pre_topc X0 X1))\wedge(v2_pre_topc (k1_pre_topc X0 X1)))$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge(l1_pre_topc X0))\wedge \quad (18)$$

$$((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0$$

$$X0))))\Rightarrow((\neg v2_struct_0 (k1_pre_topc X0 X1))\wedge(v1_pre_topc (k1_pre_topc$$

$$X0 X1)))$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0)\Rightarrow(\forall X1.(m1_pre_topc\ X1\ X0)\Rightarrow(l1_pre_topc\ X1)) \quad (19)$$

Assume the following.

$$\forall X0.(l1_rltopsp1\ X0)\Rightarrow((l1_rlvect_1\ X0)\wedge(l1_pre_topc\ X0)) \quad (20)$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0)\Rightarrow(l1_struct_0\ X0) \quad (21)$$

Assume the following.

$$\forall X0.(l1_struct_0\ X0)\Rightarrow(m1_subset_1\ (k2_struct_0\ X0)\ (k1_zfmisc_1\ (u1_struct_0\ X0))) \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.((l1_pre_topc\ X0)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0))))\Rightarrow((v1_pre_topc\ (k1_pre_topc\ X0\ X1))\wedge(m1_pre_topc\ (k1_pre_topc\ X0\ X1)\ X0)) \quad (23)$$

Assume the following.

$$l1_pre_topc\ k17_borsuk_1 \quad (24)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow((v5_rltopsp1\ (k15_euclid\ X0))\wedge(l1_rltopsp1\ (k15_euclid\ X0))) \quad (25)$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0)\Rightarrow(\forall X1.(l1_pre_topc\ X1)\Rightarrow(\forall X2.((v1_funct_1\ X2)\wedge((v1_funct_2\ X2\ (u1_struct_0\ X0)\ (u1_struct_0\ X1))\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0\ X0)\ (u1_struct_0\ X1))))))\Rightarrow((v3_tops_2\ X2\ X0\ X1)\Leftrightarrow((k1_relset_1\ (u1_struct_0\ X0)\ X2 = k2_struct_0\ X0)\wedge((k2_relset_1\ (u1_struct_0\ X1)\ X2 = k2_struct_0\ X1)\wedge((v2_funct_1\ X2)\wedge((v5_pre_topc\ X2\ X0\ X1)\wedge(v5_pre_topc\ (k2_tops_2\ (u1_struct_0\ X0)\ (u1_struct_0\ X1)\ X2)\ X1\ X0)))))))) \quad (26)$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))\Rightarrow(\forall X2.((v1_pre_topc\ X2)\wedge(m1_pre_topc\ X2\ X0))\Rightarrow((X2 = k1_pre_topc\ X0\ X1)\Leftrightarrow(k2_struct_0\ X2 = X1)))) \quad (27)$$

Assume the following.

$$\forall X0.(l1_struct_0\ X0)\Rightarrow(k2_struct_0\ X0 = u1_struct_0\ X0) \quad (28)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v2_pre_topc\ X0)\wedge(l1_pre_topc\ X0))\Rightarrow(\forall X1. \\
& (m1_subset_1\ X1\ (u1_struct_0\ X0))\Rightarrow(\forall X2.(m1_subset_1\ X2 \\
& (u1_struct_0\ X0))\Rightarrow(\forall X3.(m1_subset_1\ X3\ (k1_zfmisc_1\ (\\
& u1_struct_0\ X0)))\Rightarrow((r1_topreal1\ X0\ X1\ X2\ X3)\Leftrightarrow(\exists X4.((v1_funct_1 \\
& X4)\wedge((v1_funct_2\ X4\ (u1_struct_0\ k5_topmetr)\ (u1_struct_0\ (k1_pre_topc \\
& X0\ X3)))\wedge(m1_subset_1\ X4\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0 \\
& k5_topmetr)\ (u1_struct_0\ (k1_pre_topc\ X0\ X3))))))\wedge((v3_tops-2 \\
& X4\ k5_topmetr\ (k1_pre_topc\ X0\ X3))\wedge((k1_funct_1\ X4\ k6_numbers = \\
& X1)\wedge(k1_funct_1\ X4\ np_1 = X2)))))))))
\end{aligned} \tag{29}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow((v4_relat_1\ X2\ X0)\wedge(v5_relat_1\ X2\ X1)) \tag{30}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow(v1_relat_1\ X2) \tag{31}$$

Assume the following.

$$\forall X0.(v6_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v7_ordinal1\ X1)) \tag{32}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(m1_subset_1\ X0\ k5_numbers)\Rightarrow(\forall X1.(m1_subset_1 \\
& X1\ (k1_zfmisc_1\ (u1_struct_0\ (k15_euclid\ X0))))\Rightarrow(\forall X2. \\
& (m1_subset_1\ X2\ (u1_struct_0\ (k15_euclid\ X0)))\Rightarrow(\forall X3.(\\
& m1_subset_1\ X3\ (u1_struct_0\ (k15_euclid\ X0)))\Rightarrow((r1_topreal1 \\
& (k15_euclid\ X0)\ X2\ X3\ X1)\Rightarrow(v2_connsp_1\ X1\ (k15_euclid\ X0))))))
\end{aligned}$$