

t1_jordan5a
(TMN4XKcZKg2QJSohD96xbA9S68WPTpdiUWc)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_compts_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_compts_1 : \iota \Rightarrow o$ be given. Let $k1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ 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 $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_struct_0 : \iota \Rightarrow \iota$ be given. Let $k5_topmetr : \iota$ be given. Let $k17_borsuk_1 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v8_pre_topc : \iota \Rightarrow o$ 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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_rltopsp1 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_tops_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\begin{aligned} \forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow (((X1 = k1_xboole_0) \Rightarrow ((v2_compts_1 X1 X0) \Leftrightarrow \\ (v1_compts_1 (k1_pre_topc X0 X1)))) \wedge ((v2_pre_topc X0) \Rightarrow ((X1 = \\ k1_xboole_0) \vee ((v2_compts_1 X1 X0) \Leftrightarrow (v1_compts_1 (k1_pre_topc \\ X0 X1))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_pre_topc\ X0) \Rightarrow (\forall X1.((\neg v2_struct_0\ X1) \wedge \\ (l1_pre_topc\ X1)) \Rightarrow (\forall X2.((v1_funct_1\ X2) \wedge ((v1_funct_2 \\ X2\ (u1_struct_0\ X0)\ (u1_struct_0\ X1)) \wedge (m1_subset_1\ X2\ (k1_zfmisc_1 \\ (k2_zfmisc_1\ (u1_struct_0\ X0)\ (u1_struct_0\ X1)))))) \Rightarrow (((v1_compts_1 \\ X0) \wedge ((v5_pre_topc\ X2\ X0\ X1) \wedge (k2_relset_1\ (u1_struct_0\ X1)\ X2 = \\ k2_struct_0\ X1))) \Rightarrow (v1_compts_1\ X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$k5_topmetr = k17_borsuk_1 \quad (3)$$

Assume the following.

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

Assume the following.

$$(v8_pre_topc\ k17_borsuk_1) \wedge (v1_compts_1\ k17_borsuk_1) \quad (5)$$

Assume the following.

$$v6_membered\ k4_ordinal1 \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow ((v2_pre_topc\ (k15_euclid\ X0)) \wedge \\ ((v13_algstr_0\ (k15_euclid\ X0)) \wedge ((v2_rlvect_1\ (k15_euclid\ X0)) \wedge \\ ((v3_rlvect_1\ (k15_euclid\ X0)) \wedge ((v4_rlvect_1\ (k15_euclid\ X0)) \wedge \\ ((v5_rlvect_1\ (k15_euclid\ X0)) \wedge ((v6_rlvect_1\ (k15_euclid\ X0)) \wedge \\ ((v7_rlvect_1\ (k15_euclid\ X0)) \wedge ((v8_rlvect_1\ (k15_euclid\ X0)) \wedge \\ (v5_rltopsp1\ (k15_euclid\ X0)))))))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow ((\neg v2_struct_0\ (k15_euclid\ X0)) \wedge \\ (v5_rltopsp1\ (k15_euclid\ X0))) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((\neg v2_struct_0\ X0) \wedge (l1_pre_topc\ X0)) \wedge \\ ((\neg v1_xboole_0\ X1) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0 \\ X0)))))) \Rightarrow ((\neg v2_struct_0\ (k1_pre_topc\ X0\ X1)) \wedge (v1_pre_topc\ (k1_pre_topc \\ X0\ X1))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0) \Rightarrow (\forall X1.(m1_pre_topc\ X1\ X0) \Rightarrow \\ (l1_pre_topc\ X1)) \quad (10)$$

Assume the following.

$$\forall X0.(l1_rltopsp1\ X0)\Rightarrow((l1_rlvect_1\ X0)\wedge(l1_pre_topc\ X0)) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((l1_pre_topc\ X0)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0))))\Rightarrow((v1_pre_topc\ (k1_pre_topc\ X0\ X1))\wedge(m1_pre_topc\ (k1_pre_topc\ X0\ X1)\ X0)) \quad (12)$$

Assume the following.

$$l1_pre_topc\ k17_borsuk_1 \quad (13)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow((v5_rltopsp1\ (k15_euclid\ X0))\wedge(l1_rltopsp1\ (k15_euclid\ X0))) \quad (14)$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0)\Rightarrow(\forall X1.(l1_pre_topc\ X1)\Rightarrow(\forall X2.((v1_funct_1\ X2)\wedge((v1_funct_2\ X2\ (u1_struct_0\ X0)\ (u1_struct_0\ X1))\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0\ X0)\ (u1_struct_0\ X1))))))\Rightarrow((v3_tops_2\ X2\ X0\ X1)\Leftrightarrow((k1_relset_1\ (u1_struct_0\ X0)\ X2 = k2_struct_0\ X0)\wedge((k2_relset_1\ (u1_struct_0\ X1)\ X2 = k2_struct_0\ X1)\wedge((v2_funct_1\ X2)\wedge((v5_pre_topc\ X2\ X0\ X1)\wedge(v5_pre_topc\ (k2_tops_2\ (u1_struct_0\ X0)\ (u1_struct_0\ X1)\ X2)\ X1\ X0)))))))))) \quad (15)$$

Assume the following.

$$\forall X0.((v2_pre_topc\ X0)\wedge(l1_pre_topc\ X0))\Rightarrow(\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ X0))\Rightarrow(\forall X2.(m1_subset_1\ X2\ (u1_struct_0\ X0))\Rightarrow(\forall X3.(m1_subset_1\ X3\ (k1_zfmisc_1\ (u1_struct_0\ X0))))\Rightarrow((r1_topreal1\ X0\ X1\ X2\ X3)\Leftrightarrow(\exists X4.((v1_funct_1\ X4)\wedge((v1_funct_2\ X4\ (u1_struct_0\ k5_topmetr)\ (u1_struct_0\ (k1_pre_topc\ X0\ X3)))\wedge(m1_subset_1\ X4\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0\ k5_topmetr)\ (u1_struct_0\ (k1_pre_topc\ X0\ X3))))))\wedge((v3_tops_2\ X4\ k5_topmetr\ (k1_pre_topc\ X0\ X3))\wedge((k1_funct_1\ X4\ k6_numbers = X1)\wedge(k1_funct_1\ X4\ np_1 = X2)))))))))) \quad (16)$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))\Rightarrow((v1_xboole_0\ X1)\Rightarrow(v2_compts_1\ X1\ X0))) \quad (17)$$

Assume the following.

$$\forall X0.(v6_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v7_ordinal1\ X1)) \quad (18)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (u1_struct_0 (k15_euclid X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 \\ & (u1_struct_0 (k15_euclid X0))) \Rightarrow (\forall X3.(m1_subset_1 X3 (\\ & k1_zfmisc_1 (u1_struct_0 (k15_euclid X0)))) \Rightarrow ((r1_topreal1 (\\ & k15_euclid X0) X1 X2 X3) \Rightarrow (v2_compts_1 X3 (k15_euclid X0)))))) \end{aligned}$$