

l19_jordan (TM-
Fvwaf042ircmWtFYPPDGMN5a2TTZKTSfY)

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Let $m1_subset.1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v1_topreal2 : \iota \Rightarrow o$ be given. Let $k1_zfmisc.1 : \iota \Rightarrow \iota$ be given. Let $k1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_subset.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xboole.0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_domain.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v1_xboole.0 : \iota \Rightarrow o$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ 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 $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $l1_rltopsp1 : \iota \Rightarrow o$ be given. Let $l1_rlvect.1 : \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v5_rltopsp1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_subset.1 X1 (k1_zfmisc.1 (u1_struct.0 X0))) \Rightarrow (u1_struct.0 (k1_pre_topc X0 X1) = X1)) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\neg(X0 \in X1) \wedge (v1_xboole.0 X1) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(\neg X0 \in X1) \Rightarrow (r1_xboole.0 (k1_tarski X0) X1) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(\neg(\neg r1_xboole.0 X0 X1) \wedge (\forall X2.\neg(X2 \in X0) \wedge (X2 \in X1))) \wedge (\neg(\exists X2.(X2 \in X0) \wedge (X2 \in X1)) \wedge (r1_xboole.0 X0 X1)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset.1 X0 (k1_zfmisc.1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(\forall X2. \\ & (m1_subset_1 X2 (k1_zfmisc_1 X0))\Rightarrow((r1_xboole_0 X1 X2)\Leftrightarrow(r1_tarski \\ & X1 (k3_subset_1 X0 X2)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_pre_topc X0)\Rightarrow(\forall X1.(m1_pre_topc X1 X0)\Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X1)))\Rightarrow \\ & (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))))) \end{aligned} \quad (7)$$

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.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X1 X0))\Rightarrow \\ & (k6_domain_1 X0 X1 = k1_tarski X1) \end{aligned} \quad (9)$$

Assume the following.

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

Assume the following.

$$v6_membered k4_ordinal1 \quad (11)$$

Assume the following.

$$\forall X0.(l1_rltopsp1 X0)\Rightarrow((l1_rlvect_1 X0)\wedge(l1_pre_topc X0)) \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(m1_subset_1 \\ & (k3_subset_1 X0 X1) (k1_zfmisc_1 X0)) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((l1_pre_topc X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 X0))))\Rightarrow((v1_pre_topc (k1_pre_topc X0 X1))\wedge(m1_pre_topc \\ & (k1_pre_topc X0 X1) X0)) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0)\Rightarrow((v5_rltopsp1 (k15_euclid X0))\wedge \\ & (l1_rltopsp1 (k15_euclid X0))) \end{aligned} \quad (15)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \quad (16)$$

Assume the following.

$$\forall X0.(v6_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v7_ordinal1 X1)) \quad (17)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (\forall X1.((v1_topreal2 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (\\ & \quad u1_struct_0 (k15_euclid np_2)))))) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (k1_zfmisc_1 (u1_struct_0 (k1_pre_topc (k15_euclid np_2) \\ & \quad (k3_subset_1 (u1_struct_0 (k15_euclid np_2)) X1)))))) \Rightarrow ((X0 \in \\ & X1) \Rightarrow (r1_xboole_0 (k6_domain_1 (u1_struct_0 (k15_euclid np_2)) \\ & \quad X0) X2)))) \end{aligned}$$