

t39_jordan1k (TM- cuna7MQuDvcREBbodyUQhTQN9cDQLCMen)

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Let $m1_subset.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v2_compts.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc.1 : \iota \Rightarrow \iota$ be given. Let $u1_struct.0 : \iota \Rightarrow \iota$ be given. Let $r1_xboole.0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_jordan1k : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ 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 $g1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Let $v6_metric.1 : \iota \Rightarrow o$ be given. Let $v7_metric.1 : \iota \Rightarrow o$ be given. Let $v8_metric.1 : \iota \Rightarrow o$ be given. Let $v9_metric.1 : \iota \Rightarrow o$ be given. Let $l1_metric.1 : \iota \Rightarrow o$ be given. Let $k3_pcomps.1 : \iota \Rightarrow \iota$ be given. Let $k7_weierstr : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ 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 $k14_euclid : \iota \Rightarrow \iota$ be given. Let $v1_metric.1 : \iota \Rightarrow o$ be given. Let $l1_rltopsp1 : \iota \Rightarrow o$ be given. Let $l1_rlvect.1 : \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $g1_rlvect.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2_struct.0 : \iota \Rightarrow \iota$ be given. Let $u1_algstr.0 : \iota \Rightarrow \iota$ be given. Let $u1_rlvect.1 : \iota \Rightarrow \iota$ be given. Let $k10_funcsdom : \iota \Rightarrow \iota$ be given. Let $k2_finseq.1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct.0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
 & X0))) \Rightarrow (\forall X1. ((v2_compts.1 X1 X0) \wedge (m1_subset.1 X1 (k1_zfmisc.1 \\
 & (u1_struct.0 X0)))) \Leftrightarrow ((v2_compts.1 X1 (g1_pre_topc (u1_struct.0 \\
 & X0) (u1_pre_topc X0))) \wedge (m1_subset.1 X1 (k1_zfmisc.1 (u1_struct.0 \\
 & (g1_pre_topc (u1_struct.0 X0) (u1_pre_topc X0))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v6_metric_1 X0) \wedge ((v7_metric_1 \\ & X0) \wedge ((v8_metric_1 X0) \wedge ((v9_metric_1 X0) \wedge (l1_metric_1 X0)))))) \Rightarrow \\ & (\forall X1.((v2_compts_1 X1 (k3_pcomps_1 X0)) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (u1_struct_0 (k3_pcomps_1 X0)))))) \Rightarrow (\forall X2. \\ & ((v2_compts_1 X2 (k3_pcomps_1 X0)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (u1_struct_0 (k3_pcomps_1 X0)))))) \Rightarrow ((\neg r1_xboole_0 X1 X2) \Rightarrow (k7_weierstr \\ & X0 X1 X2 = k6_numbers)))) \end{aligned} \quad (2)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (3)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow ((v2_pre_topc (k15_euclid X0)) \wedge \\ & ((v13_algstr_0 (k15_euclid X0)) \wedge ((v2_rlvect_1 (k15_euclid X0)) \wedge \\ & ((v3_rlvect_1 (k15_euclid X0)) \wedge ((v4_rlvect_1 (k15_euclid X0)) \wedge \\ & ((v5_rlvect_1 (k15_euclid X0)) \wedge ((v6_rlvect_1 (k15_euclid X0)) \wedge \\ & ((v7_rlvect_1 (k15_euclid X0)) \wedge ((v8_rlvect_1 (k15_euclid X0)) \wedge \\ & (v5_rltopsp1 (k15_euclid X0)))))))))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow ((\neg v2_struct_0 (k15_euclid X0)) \wedge (v5_rltopsp1 (k15_euclid X0))) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow ((\neg v2_struct_0 (k14_euclid X0)) \wedge \\ & ((v1_metric_1 (k14_euclid X0)) \wedge ((v6_metric_1 (k14_euclid X0)) \wedge \\ & ((v7_metric_1 (k14_euclid X0)) \wedge ((v8_metric_1 (k14_euclid X0)) \wedge \\ & (v9_metric_1 (k14_euclid X0)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(l1_rltopsp1 X0) \Rightarrow ((l1_rlvect_1 X0) \wedge (l1_pre_topc X0)) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1_subset_1 X0 k5_numbers) \wedge \\ & ((m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k15_euclid X0)))) \wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 (k15_euclid X0)))))) \Rightarrow \\ & (m1_subset_1 (k1_jordan1k X0 X1 X2) k1_numbers) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow((v5_rltopsp1\ (k15_euclid\ X0))\wedge (l1_rltopsp1\ (k15_euclid\ X0))) \quad (10)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow((v1_metric_1\ (k14_euclid\ X0))\wedge ((v6_metric_1\ (k14_euclid\ X0))\wedge((v7_metric_1\ (k14_euclid\ X0))\wedge ((v8_metric_1\ (k14_euclid\ X0))\wedge((v9_metric_1\ (k14_euclid\ X0))\wedge (l1_metric_1\ (k14_euclid\ X0)))))))) \quad (11)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.((v5_rltopsp1\ X1)\wedge(l1_rltopsp1\ X1))\Rightarrow((X1 = k15_euclid\ X0)\Leftrightarrow((g1_pre_topc\ (u1_struct_0\ X1)\ (u1_pre_topc\ X1) = k3_pcomps_1\ (k14_euclid\ X0))\wedge(g1_rlvect_1\ (u1_struct_0\ X1)\ (u2_struct_0\ X1)\ (u1_algstr_0\ X1)\ (u1_rlvect_1\ X1) = k10_funcsdom\ (k2_finseq_1\ X0)))))) \quad (12)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k5_numbers)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ (k15_euclid\ X0))))\Rightarrow(\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (u1_struct_0\ (k15_euclid\ X0))))\Rightarrow(\forall X3.(m1_subset_1\ X3\ k1_numbers)\Rightarrow((X3 = k1_jordan1k\ X0\ X1\ X2)\Leftrightarrow(\exists X4.(m1_subset_1\ X4\ (k1_zfmisc_1\ (u1_struct_0\ (k3_pcomps_1\ (k14_euclid\ X0))))))\wedge(\exists X5.(m1_subset_1\ X5\ (k1_zfmisc_1\ (u1_struct_0\ (k3_pcomps_1\ (k14_euclid\ X0))))))\wedge((X1 = X4)\wedge((X2 = X5)\wedge(X3 = k7_weierstr\ (k14_euclid\ X0)\ X4\ X5)))))))))) \quad (13)$$

Assume the following.

$$\forall X0.(v6_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v7_ordinal1\ X1)) \quad (14)$$

Theorem 1

$$\forall X0.(m1_subset_1\ X0\ k5_numbers)\Rightarrow(\forall X1.((v2_compts_1\ X1\ (k15_euclid\ X0))\wedge(m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ (k15_euclid\ X0))))\Rightarrow(\forall X2.((v2_compts_1\ X2\ (k15_euclid\ X0))\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (u1_struct_0\ (k15_euclid\ X0))))\Rightarrow((\neg r1_xboole_0\ X1\ X2)\Rightarrow(k1_jordan1k\ X0\ X1\ X2 = k6_numbers))))))$$