

t14_jordan2c
(TMUyNizoFa3kkU58F9JdoVZxpJU77kkykAr)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $r2_jordan2c : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $v3_connsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v6_tbsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k14_euclid : \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v9_rltopsp1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ 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 $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v5_rltopsp1 : \iota \Rightarrow o$ be given. Let $r3_connsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 (k15_euclid X0)))) \Rightarrow ((v9_rltopsp1 X1 (k15_euclid \\ X0)) \Leftrightarrow ((v6_tbsp_1 X1 (k14_euclid X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 (k14_euclid X0))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (2)$$

Assume the following.

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

Assume the following.

$$\neg v1_finset_1 k4_ordinal1 \quad (4)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (5)$$

Assume the following.

$$\forall X0.(l1_rltopsp1 X0) \Rightarrow ((l1_rlvect_1 X0) \wedge (l1_pre_topc X0)) \quad (6)$$

Assume the following.

$$m1_subset_1\ k5_numbers\ (k1_zfmisc_1\ k1_numbers) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ X0))\Rightarrow(m1_subset_1\ (k3_subset_1\ X0\ X1)\ (k1_zfmisc_1\ X0)) \quad (8)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow((v5_rltopsp1\ (k15_euclid\ X0))\wedge (l1_rltopsp1\ (k15_euclid\ X0))) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_pre_topc\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))\Rightarrow(\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (u1_struct_0\ X0)))\Rightarrow((r3_connsp_1\ X0\ X1\ X2)\Leftrightarrow(\exists X3.(m1_subset_1\ X3\ (k1_zfmisc_1\ (u1_struct_0\ (k1_pre_topc\ X0\ X1))))\wedge((X3 = X2)\wedge (v3_connsp_1\ X3\ (k1_pre_topc\ X0\ X1)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ (k15_euclid\ X0))))\Rightarrow(\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (u1_struct_0\ (k15_euclid\ X0))))\Rightarrow((r2_jordan2c\ X0\ X1\ X2)\Leftrightarrow((r3_connsp_1\ (k15_euclid\ X0)\ (k3_subset_1\ (u1_struct_0\ (k15_euclid\ X0))\ X1)\ X2)\wedge(\neg v9_rltopsp1\ X2\ (k15_euclid\ X0)))))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.(v1_xboole_0\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ X0))\Rightarrow(v1_xboole_0\ X1)) \quad (12)$$

Assume the following.

$$\forall X0.(v1_xboole_0\ X0)\Rightarrow(v1_finset_1\ X0) \quad (13)$$

Assume the following.

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

Theorem 1

$$\begin{aligned} \forall X0.(m2_subset_1\ X0\ k1_numbers\ k5_numbers)\Rightarrow(\forall X1. (m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ (k15_euclid\ X0))))\Rightarrow(\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (u1_struct_0\ (k15_euclid\ X0))))\Rightarrow((r2_jordan2c\ X0\ X1\ X2)\Leftrightarrow(\exists X3.(m1_subset_1\ X3\ (k1_zfmisc_1\ (u1_struct_0\ (k1_pre_topc\ (k15_euclid\ X0)\ (k3_subset_1\ (u1_struct_0\ (k15_euclid\ X0))\ X1))))\wedge((X3 = X2)\wedge((v3_connsp_1\ X3\ (k1_pre_topc\ (k15_euclid\ X0)\ (k3_subset_1\ (u1_struct_0\ (k15_euclid\ X0))\ X1))))\wedge(\neg(v6_tbsp_1\ X3\ (k14_euclid\ X0))\wedge(m1_subset_1\ X3\ (k1_zfmisc_1\ (u1_struct_0\ (k14_euclid\ X0)))))))))) \end{aligned}$$