

t116_jordan2c
(TMaTonHLfWyU9fTdx9ZrXeokuTK9bkikqsG)

October 27, 2020

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 $v2_connsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ 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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ 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 $l1_rltopsp1 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\
& (m1_pre_topc X1 X0) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\
& (u1_struct_0 X0))) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 \\
& (u1_struct_0 X1))) \Rightarrow ((X2 = X3) \Rightarrow ((v2_connsp_1 X2 X0) \Leftrightarrow (v2_connsp_1 \\
& X3 X1))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\
& (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k15_euclid X0)))) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\
& X0)))) \Rightarrow ((r2_jordan2c X0 X1 X2) \Leftrightarrow (\exists X3.(m1_subset_1 X3 (k1_zfmisc_1 \\
& (u1_struct_0 (k1_pre_topc (k15_euclid X0) (k3_subset_1 (u1_struct_0 \\
& (k15_euclid X0)) X1)))) \wedge ((X3 = X2) \wedge ((v3_connsp_1 X3 (k1_pre_topc \\
& (k15_euclid X0) (k3_subset_1 (u1_struct_0 (k15_euclid X0)) X1))) \wedge \\
& (\neg (v6_tbsp_1 X3 (k14_euclid X0)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\
& (u1_struct_0 (k14_euclid X0))))))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 X0))))\Rightarrow(\forall X2.(m2_subset_1 X2 X0 X1)\Leftrightarrow(m1_subset_1 X2 X1)) \quad (3)$$

Assume the following.

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

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (5)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow((v2_pre_topc (k15_euclid X0))\wedge((v13_algstr_0 (k15_euclid X0))\wedge((v2_rlvect_1 (k15_euclid X0))\wedge((v3_rlvect_1 (k15_euclid X0))\wedge((v4_rlvect_1 (k15_euclid X0))\wedge((v5_rlvect_1 (k15_euclid X0))\wedge((v6_rlvect_1 (k15_euclid X0))\wedge((v7_rlvect_1 (k15_euclid X0))\wedge((v8_rlvect_1 (k15_euclid X0))\wedge(v5_rltopsp1 (k15_euclid X0)))))))))) \quad (6)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (7)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0)\Rightarrow(\forall X1.(m1_pre_topc X1 X0)\Rightarrow(l1_pre_topc X1)) \quad (8)$$

Assume the following.

$$\forall X0.(l1_rltopsp1 X0)\Rightarrow((l1_rlvect_1 X0)\wedge(l1_pre_topc X0)) \quad (9)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(m1_subset_1 (k3_subset_1 X0 X1) (k1_zfmisc_1 X0)) \quad (11)$$

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.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow((v5_rltopsp1\ (k15_euclid\ X0))\wedge (l1_rltopsp1\ (k15_euclid\ X0))) \quad (13)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k4_ordinal1)\Rightarrow(v7_ordinal1\ X0) \quad (14)$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))\Rightarrow((v3_connsp_1\ X1\ X0)\Rightarrow(v2_connsp_1\ X1\ X0))) \quad (15)$$

Theorem 1

$$\begin{aligned} &\forall X0.(m2_subset_1\ X0\ k1_numbers\ k5_numbers)\Rightarrow(\forall X1. \\ &(m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ (k15_euclid\ X0))))\Rightarrow \\ &(\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (u1_struct_0\ (k15_euclid \\ &X0))))\Rightarrow((r2_jordan2c\ X0\ X1\ X2)\Rightarrow(v2_connsp_1\ X2\ (k15_euclid\ X0)))) \end{aligned}$$