

t20_jordan_a (TMJDXCzLuM- cYc3Xq8GTJCaPprq4kPLepwoG)

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Let $v1_topreal2 : \iota \Rightarrow o$ 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 $np_2 : \iota$ be given. Let $r1_jordan6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_compts_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_jordan7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k18_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $r1_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $k4_ordinal1 : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ 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 $v1_finset_1 : \iota \Rightarrow o$ 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. Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v1_xboole_0 X0) \wedge ((v2_compts_1 X0 (k15_euclid np_2)) \wedge \\
& (m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow \\
& (\forall X1. (m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow \\
& (((v1_topreal2 X0) \wedge (X1 \in X0)) \Rightarrow ((X1 = k18_pscomp_1 X0) \vee (k1_jordan7 \\
& X0 X1 X1 = k1_tarski X1))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v1_xboole_0 X0) \wedge ((v2_compts_1 X0 (k15_euclid np_2)) \wedge \\
& (m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow \\
& (\forall X1. (m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow \\
& (\forall X2. (m1_subset_1 X2 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow \\
& (((v1_topreal2 X0) \wedge (r1_jordan6 X0 X1 X2)) \Rightarrow ((X1 \in X0) \wedge (X2 \in X0))))
\end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 (u1_struct_0 (k15_euclid X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 \\ (u1_struct_0 (k15_euclid X0))) \Rightarrow (\forall X3.(m1_subset_1 X3 (\\ k1_zfmisc_1 (u1_struct_0 (k15_euclid X0)))) \Rightarrow ((r1_topreal1 (\\ k15_euclid X0) X1 X2 X3) \Rightarrow (v2_compts_1 X3 (k15_euclid X0)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_topreal2 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 \\ (k15_euclid np_2)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ (k15_euclid np_2))) \Rightarrow ((X1 \in X0) \Rightarrow (v2_compts_1 (k1_jordan7 X0 X1 \\ (k18_pscomp_1 X0)) (k15_euclid np_2)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_topreal2 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 \\ (k15_euclid np_2)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ (k15_euclid np_2))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ (k15_euclid np_2))) \Rightarrow ((r1_jordan6 X0 X1 X2) \Rightarrow ((X1 = X2) \vee (r1_topreal1 \\ (k15_euclid np_2) X1 X2 (k1_jordan7 X0 X1 X2)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\ ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \end{aligned} \quad (7)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow ((v2_pre_topc (k15_euclid X0)) \wedge \\ ((v13_algstr_0 (k15_euclid X0)) \wedge ((v2_rlvect_1 (k15_euclid X0)) \wedge \\ ((v3_rlvect_1 (k15_euclid X0)) \wedge ((v4_rlvect_1 (k15_euclid X0)) \wedge \\ ((v5_rlvect_1 (k15_euclid X0)) \wedge ((v6_rlvect_1 (k15_euclid X0)) \wedge \\ ((v7_rlvect_1 (k15_euclid X0)) \wedge ((v8_rlvect_1 (k15_euclid X0)) \wedge \\ (v5_rltopsp1 (k15_euclid X0)))))))))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.v1_finset_1 (k1_tarski X0) \quad (10)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v1_xboole_0 X0)\wedge((v2_compts_1 \\ & X0 (k15_euclid np_2))\wedge(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 \\ & (k15_euclid np_2))))))\wedge((m1_subset_1 X1 (u1_struct_0 (k15_euclid \\ & np_2)))\wedge(m1_subset_1 X2 (u1_struct_0 (k15_euclid np_2))))))\Rightarrow \\ & (m1_subset_1 (k1_jordan7 X0 X1 X2) (k1_zfmisc_1 (u1_struct_0 (\\ & k15_euclid np_2)))) \end{aligned} \quad (12)$$

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.

$$\begin{aligned} & \forall X0.((v2_pre_topc X0)\wedge(l1_pre_topc X0))\Rightarrow(\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))\Rightarrow((v1_finset_1 \\ & X1)\Rightarrow(v2_compts_1 X1 X0))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ & np_2))))\Rightarrow((v1_topreal2 X0)\Rightarrow((\neg v1_xboole_0 X0)\wedge(v2_compts_1 \\ & X0 (k15_euclid np_2)))) \end{aligned} \quad (16)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_topreal2 X0)\wedge(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 \\ & (k15_euclid np_2))))))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & (k15_euclid np_2))))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ & (k15_euclid np_2))))\Rightarrow((r1_jordan6 X0 X1 X2)\Rightarrow(v2_compts_1 (k1_jordan7 \\ & X0 X1 X2) (k15_euclid np_2)))) \end{aligned}$$