

t17_jordan1j (TM-
TooeBT3rKTXaMbaXu2yxZkkuNrL177C8V)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_compts_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ 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 $r1_tarSKI : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k23_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $k17_euclid : \iota \Rightarrow \iota$ be given. Let $k18_euclid : \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k19_euclid : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k22_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $k6_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $k8_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $k9_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $k7_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k1_pscomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_pscomp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_pscomp_1 : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (((k17_euclid X0 = k17_euclid X1) \wedge (k18_euclid X0 = k18_euclid X1)) \Rightarrow \\ & (X0 = X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((k17_euclid \\ & (k19_euclid X0 X1) = X0) \wedge (k18_euclid (k19_euclid X0 X1) = X1))) \end{aligned} \tag{2}$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (\forall X1.((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow ((X0 \in k16_pscomp_1 X1) \Rightarrow \\ & ((k17_euclid X0 = k17_euclid (k23_pscomp_1 X1)) \wedge ((v2_compts_1 \\ & X1 (k15_euclid np_2)) \Rightarrow ((r1_xxreal_0 (k18_euclid (k23_pscomp_1 \\ & X1)) (k18_euclid X0)) \wedge (r1_xxreal_0 (k18_euclid X0) (k18_euclid \\ & (k22_pscomp_1 X1)))))))) \end{aligned} \tag{4}$$

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.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1)\Rightarrow((v1_xboole_0 X1)\vee (X0 \in X1)) \quad (6)$$

Assume the following.

$$\begin{aligned} &\forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2)))\Rightarrow \\ &(\forall X1.((\neg v1_xboole_0 X1)\wedge((v2_compts_1 X1 (k15_euclid \\ &np_2))\wedge(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ &np_2))))))\Rightarrow((X0 \in X1)\Rightarrow((r1_xxreal_0 (k6_pscomp_1 X1) (k17_euclid \\ &X0))\wedge((r1_xxreal_0 (k17_euclid X0) (k8_pscomp_1 X1))\wedge((r1_xxreal_0 \\ &(k9_pscomp_1 X1) (k18_euclid X0))\wedge(r1_xxreal_0 (k18_euclid X0) \\ &(k7_pscomp_1 X1)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0)\Rightarrow(\forall X1.(v1_xxreal_0 X1)\Rightarrow((r1_xxreal_0 X0 X1)\wedge(r1_xxreal_0 X1 X0))\Rightarrow(X0 = X1)) \quad (8)$$

Assume the following.

$$\begin{aligned} &\forall X0.((\neg v1_xboole_0 X0)\wedge((v2_compts_1 X0 (k15_euclid np_2))\wedge \\ &(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2))))))\Rightarrow \\ &((k23_pscomp_1 X0 \in X0)\wedge(k22_pscomp_1 X0 \in X0)) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} &\forall X0.((v2_compts_1 X0 (k15_euclid np_2))\wedge(m1_subset_1 \\ &X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))))\Rightarrow(\forall X1. \\ &(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2)))\Rightarrow(((X1 \in X0)\wedge \\ &(k17_euclid X1 = k8_pscomp_1 X0))\Rightarrow(X1 \in k16_pscomp_1 X0)) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2))))\Rightarrow(m1_subset_1 (k9_pscomp_1 X0) k1_numbers) \quad (11)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2))))\Rightarrow(m1_subset_1 (k8_pscomp_1 X0) k1_numbers) \quad (12)$$

Assume the following.

$$\begin{aligned} &\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ &np_2))))\Rightarrow(m1_subset_1 (k16_pscomp_1 X0) (k1_zfmisc_1 (u1_struct_0 \\ &(k15_euclid np_2)))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ np_2)))) \Rightarrow (k23_pscomp_1 X0 = k19_euclid (k8_pscomp_1 X0) (k1_pscomp_1 \\ (k1_pre_topc (k15_euclid np_2) (k16_pscomp_1 X0)) (k3_pscomp_1 \\ (k15_euclid np_2) k5_pscomp_1 (k16_pscomp_1 X0)))) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ np_2)))) \Rightarrow (k9_pscomp_1 X0 = k1_pscomp_1 (k1_pre_topc (k15_euclid \\ np_2) X0) (k3_pscomp_1 (k15_euclid np_2) k5_pscomp_1 X0)) \end{aligned} \quad (15)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xxreal_0 X0) \quad (16)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (17)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge ((v2_compts_1 X0 (k15_euclid np_2)) \wedge \\ (m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2))))) \Rightarrow \\ (\forall X1.((\neg v1_xboole_0 X1) \wedge ((v2_compts_1 X1 (k15_euclid \\ np_2)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ np_2))))) \Rightarrow (((r1_tarski X0 X1) \wedge (k23_pscomp_1 X1 \in X0)) \Rightarrow (k23_pscomp_1 \\ X0 = k23_pscomp_1 X1))) \end{aligned}$$