

t18_jordan_a
(TMbj3FpawXbMkxK5h4x2dbo4AgQsrDepJg8)

October 27, 2020

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 $k1_jordan7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_compts_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_jordan6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k19_euclid : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_pscomp_1 : \iota \Rightarrow \iota$ 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 $k14_pscomp_1 : \iota \Rightarrow \iota$ 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.

$$\begin{aligned} \forall X0.((v1_topreal2 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 \\ (k15_euclid np_2)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ (k15_euclid np_2))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ (k15_euclid np_2)))) \Rightarrow (r1_tarski (k1_jordan7 X0 X1 X2) X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge ((v2_compts_1 X0 (k15_euclid np_2)) \wedge \\ (m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow \\ (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow \\ (((v1_topreal2 X0) \wedge (X1 \in X0)) \Rightarrow (r1_jordan6 X0 (k18_pscomp_1 X0) \\ X1))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (m1_subset_1 (k18_pscomp_1 X0) (u1_struct_0 (k15_euclid np_2))) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarSKI X0 X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow (X2 \in X1)) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0)\wedge((v2_compts_1 X0 (k15_euclid np_2))\wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2))))))\Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2)))\Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid np_2)))\Rightarrow \\ & (((X2\neq k18_pscomp_1 X0)\Rightarrow(k1_jordan7 X0 X1 X2 = ReplSep (toset (\lambda X3 : \\ & \iota.m1_subset_1 X3 (u1_struct_0 (k15_euclid np_2)))) (\lambda X3 : \\ & \iota.(r1_jordan6 X0 X1 X3)\wedge(r1_jordan6 X0 X3 X2)) (\lambda X3 : \iota.X3))))\wedge \\ & ((X2 = k18_pscomp_1 X0)\Rightarrow(k1_jordan7 X0 X1 X2 = ReplSep (toset (\lambda X3 : \\ & \iota.m1_subset_1 X3 (u1_struct_0 (k15_euclid np_2)))) (\lambda X3 : \\ & \iota.(r1_jordan6 X0 X1 X3)\vee((X1 \in X0)\wedge(X3 = k18_pscomp_1 X0)) (\lambda X3 : \\ & \iota.X3)))))) \quad (6) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ & np_2))))\Rightarrow(k18_pscomp_1 X0 = k19_euclid (k6_pscomp_1 X0) (k1_pscomp_1 \\ & (k1_pre_topc (k15_euclid np_2) (k14_pscomp_1 X0)) (k3_pscomp_1 \\ & (k15_euclid np_2) k5_pscomp_1 (k14_pscomp_1 X0)))) \quad (7) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1)\Leftrightarrow((r1_tarSKI X0 X1)\wedge(r1_tarSKI X1 X0)) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ & np_2))))\Rightarrow((v1_topreal2 X0)\Rightarrow((\neg v1_xboole_0 X0)\wedge(v2_compts_1 \\ & X0 (k15_euclid np_2)))) \quad (9) \end{aligned}$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_topreal2 X0)\wedge(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 \\ & (k15_euclid np_2)))))\Rightarrow(X0 = k1_jordan7 X0 (k18_pscomp_1 X0) (\\ & k18_pscomp_1 X0)) \end{aligned}$$