

t28_jordan5b (TM-
NYC1AyR78S5iHovDwRZMZrwa1hNAyfrNZ)

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Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v4_topreal1 : \iota \Rightarrow o$ be given. Let $k3_jordan3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k4_finseq_5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_jordan3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_5 : \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $v2_topreal1 : \iota \Rightarrow o$ be given. Let $v3_topreal1 : \iota \Rightarrow o$ be given. Let $v1_topreal1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m2_finseq_1 X1 X0) \Rightarrow \\ & ((\neg v1_xboole_0 X1) \Rightarrow ((k7_partfun1 X0 X1 np_1 = k7_partfun1 X0 (\\ & k4_finseq_5 X0 X1) (k3_finseq_1 X1)) \wedge (k7_partfun1 X0 X1 (k3_finseq_1 \\ & X1) = k7_partfun1 X0 (k4_finseq_5 X0 X1) np_1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m2_finseq_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & ((v4_topreal1 X0) \Rightarrow (k2_jordan3 X0 (k7_partfun1 (u1_struct_0 (\\ & k15_euclid np_2)) X0 np_1) = X0)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m2_finseq_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (((v4_topreal1 X0) \wedge (X1 \in k3_topreal1 np_2 X0)) \Rightarrow (k2_jordan3 (\\ & k4_finseq_5 (u1_struct_0 (k15_euclid np_2)) X0) X1 = k4_finseq_5 \\ & (u1_struct_0 (k15_euclid np_2)) (k3_jordan3 X0 X1)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m2_finseq_1 \\ & X1 (u1_struct_0 (k15_euclid X0))) \Rightarrow ((r1_xxreal_0 np_2 (k3_finseq_1 \\ & X1) \Rightarrow ((k1_funct_1 X1 np_1 \in k3_topreal1 X0 X1) \wedge ((k7_partfun1 \\ & (u1_struct_0 (k15_euclid X0)) X1 np_1 \in k3_topreal1 X0 X1) \wedge ((k1_funct_1 \\ & X1 (k3_finseq_1 X1) \in k3_topreal1 X0 X1) \wedge (k7_partfun1 (u1_struct_0 \\ & (k15_euclid X0)) X1 (k3_finseq_1 X1) \in k3_topreal1 X0 X1)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0) \Rightarrow (k4_finseq_5 X0 X1 = k3_finseq_5 X1) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0) \Rightarrow (k4_finseq_5 X0 (k4_finseq_5 X0 X1) = X1) \quad (8)$$

Assume the following.

$$\forall X0.((v4_topreal1 X0) \wedge (m1_finseq_1 X0 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (v4_topreal1 (k3_finseq_5 X0)) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m2_finseq_1 X1 X0) \Rightarrow ((v1_funct_1 X1) \wedge \\ & (v1_finseq_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_relat_1 X1) \wedge ((v5_relat_1 \\ & X1 X0) \wedge (v1_funct_1 X1))) \Rightarrow (m1_subset_1 (k7_partfun1 X0 X1 X2) X0) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow(m2_finseq_1 (k4_finseq_5 X0 X1) X0) \quad (13)$$

Assume the following.

$$\begin{aligned} &\forall X0.\forall X1.((m1_finseq_1 X0 (u1_struct_0 (k15_euclid \\ &np_2)))\wedge(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))))\Rightarrow \quad (14) \\ &(m2_finseq_1 (k3_jordan3 X0 X1) (u1_struct_0 (k15_euclid np_2))) \end{aligned}$$

Assume the following.

$$\begin{aligned} &\forall X0.(m2_finseq_1 X0 (u1_struct_0 (k15_euclid np_2)))\Rightarrow \\ &((v4_topreal1 X0)\Leftrightarrow((v2_funct_1 X0)\wedge((r1_xxreal_0 np_2 (k3_finseq_1 \\ &X0))\wedge((v2_topreal1 X0)\wedge((v3_topreal1 X0)\wedge(v1_topreal1 X0)))))) \quad (15) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.(v1_xboole_0 X0)\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 X0)))\Rightarrow(v1_xboole_0 X2)) \quad (16)$$

Assume the following.

$$\forall X0.(m1_finseq_1 X0 (u1_struct_0 (k15_euclid np_2)))\Rightarrow \quad (17) \\ ((v4_topreal1 X0)\Rightarrow(\neg v1_xboole_0 X0))$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \quad (18)$$

Theorem 1

$$\begin{aligned} &\forall X0.(m2_finseq_1 X0 (u1_struct_0 (k15_euclid np_2)))\Rightarrow \\ &((v4_topreal1 X0)\Rightarrow(k3_jordan3 X0 (k7_partfun1 (u1_struct_0 (\\ &k15_euclid np_2)) X0 (k3_finseq_1 X0)) = X0)) \end{aligned}$$