

t22_jordan5b

(TMajwSumLyKBsdf5Yzay3tdKeFvhCKkKAFv)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v4_topreal1 : \iota \Rightarrow o$ be given. Let $k2_jordan3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $r1_jordan3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_finseq_5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ 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 $k4_ordinal1 : \iota$ be given. Let $k3_finseq_5 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. ((\neg v1_xboole_0 X0) \wedge ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0)))) \Rightarrow ((np_1 \in k4_finseq_1 X0) \wedge (k3_finseq_1 X0 \in k4_finseq_1 X0)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m2_finseq_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (\forall X1. (m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (((v4_topreal1 X0) \wedge (X1 \in k3_topreal1 np_2 X0)) \Rightarrow ((X1 = k1_funct_1 \\ & X0 (k3_finseq_1 X0)) \vee (r1_jordan3 (k2_jordan3 X0 X1) X1 (k7_partfun1 \\ & (u1_struct_0 (k15_euclid np_2)) X0 (k3_finseq_1 X0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. (m2_finseq_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow (k3_topreal1 np_2 X0 = k3_topreal1 np_2 (k4_finseq_5 (u1_struct_0 (k15_euclid np_2)) X0)) \quad (3)$$

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.

$$\begin{aligned} \forall X0.(m2_finseq_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ ((r1_jordan3 X0 X1 X2) \Rightarrow (r1_jordan3 (k4_finseq_5 (u1_struct_0 \\ (k15_euclid np_2)) X0) X2 X1)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\ ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (7)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0) \Rightarrow (k4_finseq_5 X0 X1 = k3_finseq_5 X1) \quad (9)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ (k4_finseq_1 X0 = k9_xtuple_0 X0) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0) \Rightarrow (k4_finseq_5 X0 (k4_finseq_5 X0 X1) = X1) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0) \Rightarrow ((v1_funct_1 X1) \wedge \\ (v1_finseq_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge(v1_funct_1 X1)\wedge(v1_finseq_1 X1)) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow(m2_finseq_1 (k4_finseq_5 X0 X1) X0) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((m1_finseq_1 X0 (u1_struct_0 (k15_euclid np_2)))\wedge(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))))\Rightarrow(m2_finseq_1 (k2_jordan3 X0 X1) (u1_struct_0 (k15_euclid np_2))) \quad (15)$$

Assume the following.

$$\forall X0.(m2_finseq_1 X0 (u1_struct_0 (k15_euclid np_2)))\Rightarrow((v4_topreal1 X0)\Leftrightarrow((v2_funct_1 X0)\wedge((r1_xxreal_0 np_2 (k3_finseq_1 X0))\wedge((v3_topreal1 X0)\wedge(v1_topreal1 X0)))))) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge((v5_relat_1 X1 X0)\wedge(v1_funct_1 X1)))\Rightarrow(\forall X2.(X2 \in k9_xtuple_0 X1)\Rightarrow(k7_partfun1 X0 X1 X2 = k1_funct_1 X1 X2)) \quad (17)$$

Assume the following.

$$\forall X0.(m2_finseq_1 X0 (u1_struct_0 (k15_euclid np_2)))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2)))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid np_2)))\Rightarrow((r1_jordan3 X0 X1 X2)\Leftrightarrow((v4_topreal1 X0)\wedge((k1_funct_1 X0 np_1 = X1)\wedge(k1_funct_1 X0 (k3_finseq_1 X0) = X2)))))) \quad (18)$$

Assume the following.

$$\forall X0.(m1_finseq_1 X0 (u1_struct_0 (k15_euclid np_2)))\Rightarrow((v4_topreal1 X0)\Rightarrow(\neg v1_xboole_0 X0)) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow(v5_relat_1 X1 X0) \quad (20)$$

Theorem 1

$$\forall X0.(m2_finseq_1 X0 (u1_struct_0 (k15_euclid np_2)))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2)))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid np_2)))\Rightarrow(((X1 \in k3_topreal1 np_2 X0)\wedge((X2 \in k3_topreal1 np_2 X0)\wedge((X1 = k1_funct_1 X0 (k3_finseq_1 X0))\wedge(v4_topreal1 X0))))\Rightarrow((X2 = k1_funct_1 X0 (k3_finseq_1 X0))\vee(X1 \in k3_topreal1 np_2 (k2_jordan3 X0 X2))))))$$