

t47_jordan4 (TMLhEHgnDper- BaWs2LnsM49dWvKeqdsErnC)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_6 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v1_topreal1 : \iota \Rightarrow o$ be given. Let $v2_topreal1 : \iota \Rightarrow o$ be given. Let $v1_goboard5 : \iota \Rightarrow o$ be given. Let $v2_goboard5 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $r2_jordan4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_topreal4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_jordan4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_finseq_5 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k4_ordinal1 : \iota$ 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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ np_2)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid \\ np_2))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid \\ np_2)))) \Rightarrow ((r1_topreal4 X0 X1 X2) \Rightarrow (r1_topreal4 X0 X2 X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge ((\neg v3_funct_1 X0) \wedge ((v1_finseq_6 \\ X0 (u1_struct_0 (k15_euclid np_2)))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m2_finseq_1 X0 (u1_struct_0 \\ (k15_euclid np_2)))))))))) \Rightarrow (\forall X1.(m2_finseq_1 X1 (u1_struct_0 \\ (k15_euclid np_2))) \Rightarrow (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow \\ (\forall X3.(m1_subset_1 X3 k5_numbers) \Rightarrow ((r1_jordan4 X0 X1 X2 \\ X3) \Rightarrow ((X2 = X3) \vee (r1_topreal4 (k3_topreal1 np_2 X1) (k7_partfun1 \\ (u1_struct_0 (k15_euclid np_2)) X0 X2) (k7_partfun1 (u1_struct_0 \\ (k15_euclid np_2)) X0 X3))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge (\neg v3_funct_1 X0) \wedge ((v1_finseq_6 \\ & X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ & X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m2_finseq_1 X0 (u1_struct_0 \\ & (k15_euclid np_2)))))))))) \Rightarrow (\forall X1.(m2_finseq_1 X1 (u1_struct_0 \\ & (k15_euclid np_2))) \Rightarrow (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow \\ & (\forall X3.(m1_subset_1 X3 k5_numbers) \Rightarrow ((r2_jordan4 X0 X1 X2 \\ & X3) \Rightarrow (r1_jordan4 X0 (k4_finseq_5 (u1_struct_0 (k15_euclid np_2)) \\ & X1) X3 X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2_finseq_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (k3_topreal1 np_2 X0 = k3_topreal1 np_2 (k4_finseq_5 (u1_struct_0 \\ & (k15_euclid np_2)) X0)) \end{aligned} \quad (4)$$

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.

$$k5_numbers = k4_ordinal1 \quad (7)$$

Assume the following.

$$\forall X0. \forall X1.(m1_finseq_1 X1 X0) \Rightarrow (k4_finseq_5 X0 X1 = k3_finseq_5 X1) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1.(m2_finseq_1 X1 X0) \Rightarrow ((v1_funct_1 X1) \wedge (\\ & (v1_finseq_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\ & X0)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. \forall X1.(m1_finseq_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_relat_1 X1) \wedge ((v5_relat_1 \\ & X1 X0) \wedge (v1_funct_1 X1))) \Rightarrow (m1_subset_1 (k7_partfun1 X0 X1 X2) X0) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow(m2_finseq_1 (k4_finseq_5 X0 X1) X0) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0)\wedge(m1_finseq_1 X1 (u1_struct_0 (k15_euclid X0))))\Rightarrow(m1_subset_1 (k3_topreal1 X0 X1) (k1_zfmisc_1 (u1_struct_0 (k15_euclid X0)))) \quad (13)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow(v5_relat_1 X1 X0) \quad (15)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0)\wedge(\neg v3_funct_1 X0)\wedge((v1_finseq_6 \\ & X0 (u1_struct_0 (k15_euclid np_2)))\wedge((v1_topreal1 X0)\wedge((v2_topreal1 \\ & X0)\wedge((v1_goboard5 X0)\wedge((v2_goboard5 X0)\wedge(m2_finseq_1 X0 (u1_struct_0 \\ & (k15_euclid np_2))))))))))\Rightarrow(\forall X1.(m2_finseq_1 X1 (u1_struct_0 \\ & (k15_euclid np_2)))\Rightarrow(\forall X2.(m1_subset_1 X2 k5_numbers)\Rightarrow \\ & (\forall X3.(m1_subset_1 X3 k5_numbers)\Rightarrow((r2_jordan4 X0 X1 X2 \\ & X3)\Rightarrow((X2 = X3)\vee(r1_topreal4 (k3_topreal1 np_2 X1) (k7_partfun1 \\ & (u1_struct_0 (k15_euclid np_2)) X0 X2) (k7_partfun1 (u1_struct_0 \\ & (k15_euclid np_2)) X0 X3)))))) \end{aligned}$$