

t45_jordan5d

(TMS4M3iC4G7kKaV62KFRBsU9kv891HXHSvp)

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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 $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k7_jordan5d : \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k2_goboard2 : \iota \Rightarrow \iota$ be given. Let $k8_jordan5d : \iota \Rightarrow \iota$ be given. Let $k5_jordan5d : \iota \Rightarrow \iota$ be given. Let $k6_jordan5d : \iota \Rightarrow \iota$ 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 $v1_matrix_1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k1_matrix_1 : \iota \Rightarrow \iota$ 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 $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Let $k3_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k21_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $k3_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k20_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $k24_pscomp_1 : \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k25_pscomp_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v1_finseq_1 \\ & X0) \wedge (v1_matrix_1 X0)))) \Rightarrow (\forall X1. (v7_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v7_ordinal1 X2) \Rightarrow ((k4_tarski X1 X2 \in k2_matrix_1 X0) \Rightarrow ((r1_xxreal_0 \\ & np_1 X1) \wedge ((r1_xxreal_0 X1 (k3_finseq_1 X0)) \wedge ((r1_xxreal_0 np_1 \\ & X2) \wedge (r1_xxreal_0 X2 (k1_matrix_1 X0))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 X0))))\Rightarrow(\forall X2.(m2_subset_1 X2 X0 X1)\Leftrightarrow(m1_subset_1 X2 X1)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Leftrightarrow(m1_finseq_1 X1 X0) \quad (4)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (5)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1)\wedge(v3_ordinal1 k4_ordinal1) \quad (6)$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge((v1_finseq_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 X1))) \quad (9)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0)\wedge((\neg v3_funct_1 X0)\wedge((v1_finseq_6 X0 (u1_struct_0 (k15_euclid np_2))))\wedge((v1_topreal1 X0)\wedge((v2_topreal1 X0)\wedge((v1_goboard5 X0)\wedge((v2_goboard5 X0)\wedge(m1_finseq_1 X0 (u1_struct_0 (k15_euclid np_2))))))))))\Rightarrow(m2_subset_1 (k8_jordan5d X0) k1_numbers k5_numbers) \quad (10)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0)\wedge((\neg v3_funct_1 X0)\wedge((v1_finseq_6 X0 (u1_struct_0 (k15_euclid np_2))))\wedge((v1_topreal1 X0)\wedge((v2_topreal1 X0)\wedge((v1_goboard5 X0)\wedge((v2_goboard5 X0)\wedge(m1_finseq_1 X0 (u1_struct_0 (k15_euclid np_2))))))))))\Rightarrow(m2_subset_1 (k7_jordan5d X0) k1_numbers k5_numbers) \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge ((\neg v3_funct_1 X0) \wedge ((v1_finseq_6 \\ X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m1_finseq_1 X0 (u1_struct_0 \\ (k15_euclid np_2)))))))))) \Rightarrow (m2_subset_1 (k6_jordan5d X0) k1_numbers \\ k5_numbers) \end{aligned} \quad (12)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge ((\neg v3_funct_1 X0) \wedge ((v1_finseq_6 \\ X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m1_finseq_1 X0 (u1_struct_0 \\ (k15_euclid np_2)))))))))) \Rightarrow (m2_subset_1 (k5_jordan5d X0) k1_numbers \\ k5_numbers) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge (m1_finseq_1 X0 (u1_struct_0 (\\ k15_euclid np_2)))) \Rightarrow ((v1_matrix_1 (k2_goboard2 X0) \wedge (m2_finseq_1 \\ (k2_goboard2 X0) (k3_finseq_2 (u1_struct_0 (k15_euclid np_2)))))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v1_finseq_1 \\ X0) \wedge (v1_matrix_1 X0)))) \Rightarrow (m1_subset_1 (k1_matrix_1 X0) k5_numbers) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge ((\neg v3_funct_1 X0) \wedge ((v1_finseq_6 \\ X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m2_finseq_1 X0 (u1_struct_0 \\ (k15_euclid np_2)))))))))) \Rightarrow (\forall X1.(m2_subset_1 X1 k1_numbers \\ k5_numbers) \Rightarrow ((X1 = k8_jordan5d X0) \Leftrightarrow ((k4_tarski X1 (k1_matrix_1 \\ (k2_goboard2 X0)) \in k2_matrix_1 (k2_goboard2 X0)) \wedge (k3_matrix_1 \\ (u1_struct_0 (k15_euclid np_2)) (k2_goboard2 X0) X1 (k1_matrix_1 \\ (k2_goboard2 X0)) = k21_pscomp_1 (k3_topreal1 np_2 X0)))))) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v1_xboole_0 X0) \wedge ((\neg v3_funct_1 X0) \wedge ((v1_finseq_6 \\
& X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\
& X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m2_finseq_1 X0 (u1_struct_0 \\
& (k15_euclid np_2)))))))))) \Rightarrow (\forall X1.(m2_subset_1 X1 k1_numbers \\
& k5_numbers) \Rightarrow ((X1 = k7_jordan5d X0) \Leftrightarrow ((k4_tarski X1 (k1_matrix_1 \\
& (k2_goboard2 X0)) \in k2_matrix_1 (k2_goboard2 X0)) \wedge (k3_matrix_1 \\
& (u1_struct_0 (k15_euclid np_2)) (k2_goboard2 X0) X1 (k1_matrix_1 \\
& (k2_goboard2 X0)) = k20_pscomp_1 (k3_topreal1 np_2 X0))))))
\end{aligned} \tag{18}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v1_xboole_0 X0) \wedge ((\neg v3_funct_1 X0) \wedge ((v1_finseq_6 \\
& X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\
& X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m2_finseq_1 X0 (u1_struct_0 \\
& (k15_euclid np_2)))))))))) \Rightarrow (\forall X1.(m2_subset_1 X1 k1_numbers \\
& k5_numbers) \Rightarrow ((X1 = k6_jordan5d X0) \Leftrightarrow ((k4_tarski X1 np_1 \in k2_matrix_1 \\
& (k2_goboard2 X0)) \wedge (k3_matrix_1 (u1_struct_0 (k15_euclid np_2)) \\
& (k2_goboard2 X0) X1 np_1 = k24_pscomp_1 (k3_topreal1 np_2 X0))))))
\end{aligned} \tag{19}$$

Assume the following.

$$\forall X0. \forall X1. k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \tag{20}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v1_xboole_0 X0) \wedge ((\neg v3_funct_1 X0) \wedge ((v1_finseq_6 \\
& X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\
& X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m2_finseq_1 X0 (u1_struct_0 \\
& (k15_euclid np_2)))))))))) \Rightarrow (\forall X1.(m2_subset_1 X1 k1_numbers \\
& k5_numbers) \Rightarrow ((X1 = k5_jordan5d X0) \Leftrightarrow ((k4_tarski X1 np_1 \in k2_matrix_1 \\
& (k2_goboard2 X0)) \wedge (k3_matrix_1 (u1_struct_0 (k15_euclid np_2)) \\
& (k2_goboard2 X0) X1 np_1 = k25_pscomp_1 (k3_topreal1 np_2 X0))))))
\end{aligned} \tag{21}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1) \Rightarrow (v7_ordinal1 X0) \tag{22}$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v1_xboole_0 X0) \wedge (\neg v3_funct_1 X0) \wedge ((v1_finseq_6 \\ & X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ & X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m2_finseq_1 X0 (u1_struct_0 \\ & (k15_euclid np_2)))))))))) \Rightarrow ((r1_xxreal_0 np_1 (k7_jordan5d \\ & X0)) \wedge ((r1_xxreal_0 (k7_jordan5d X0) (k3_finseq_1 (k2_goboard2 \\ & X0))) \wedge ((r1_xxreal_0 np_1 (k8_jordan5d X0)) \wedge ((r1_xxreal_0 (\\ & k8_jordan5d X0) (k3_finseq_1 (k2_goboard2 X0))) \wedge ((r1_xxreal_0 \\ & np_1 (k5_jordan5d X0)) \wedge ((r1_xxreal_0 (k5_jordan5d X0) (k3_finseq_1 \\ & (k2_goboard2 X0))) \wedge ((r1_xxreal_0 np_1 (k6_jordan5d X0)) \wedge (r1_xxreal_0 \\ & (k6_jordan5d X0) (k3_finseq_1 (k2_goboard2 X0)))))))))) \end{aligned}$$