

t4_jordan14

(TMbmp9fTWnffqtWBKxChfsMxMA5JBmgXfs5)

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Let $v3_relat_1 : \iota \Rightarrow o$ be given. Let $v1_matrix_1 : \iota \Rightarrow o$ be given. Let $v2_goboard1 : \iota \Rightarrow o$ be given. Let $v3_goboard1 : \iota \Rightarrow o$ be given. Let $v4_goboard1 : \iota \Rightarrow o$ be given. Let $v5_goboard1 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_2 : \iota \Rightarrow \iota$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k2_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k1_tops_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_goboard5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k17_euclid : \iota \Rightarrow \iota$ be given. Let $k3_matrix_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_euclid : \iota \Rightarrow \iota$ be given. Let $k19_euclid : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $v3_membered : \iota \Rightarrow o$ 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 $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ (X0 = k19_euclid (k17_euclid X0) (k18_euclid X0)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((k17_euclid \\ (k19_euclid X0 X1) = X0) \wedge (k18_euclid (k19_euclid X0 X1) = X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 k5_numbers) \Rightarrow (\forall X2.((v1_matrix_1 X2) \wedge (m2_finseq_1 X2 \\
& (k3_finseq_2 (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow (((v2_goboard1 \\
& X2) \wedge ((r1_xxreal_0 np_1 X0) \wedge ((r1_xxreal_0 X0 (k1_matrix_1 X2)) \wedge \\
& ((r1_xxreal_0 np_1 X1) \wedge (r1_xxreal_0 X1 (k3_finseq_1 X2)))))) \Rightarrow \\
& (k17_euclid (k3_matrix_1 (u1_struct_0 (k15_euclid np_2)) X2 \\
& X1 X0) = k17_euclid (k3_matrix_1 (u1_struct_0 (k15_euclid np_2)) \\
& X2 X1 np_1))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 k5_numbers) \Rightarrow (\forall X2.((\neg v3_relat_1 X2) \wedge ((v1_matrix_1 \\
& X2) \wedge ((v2_goboard1 X2) \wedge ((v3_goboard1 X2) \wedge ((v4_goboard1 X2) \wedge \\
& ((v5_goboard1 X2) \wedge (m2_finseq_1 X2 (k3_finseq_2 (u1_struct_0 \\
& (k15_euclid np_2)))))))))) \Rightarrow (((r1_xxreal_0 np_1 X0) \wedge (r1_xxreal_0 \\
& np_1 X1)) \Rightarrow ((r1_xxreal_0 (k3_finseq_1 X2) X0) \vee ((r1_xxreal_0 \\
& (k1_matrix_1 X2) X1) \vee (k1_tops_1 (k15_euclid np_2) (k3_goboard5 \\
& X2 X0 X1) = ReplSep2 (toset (\lambda X3 : \iota.m1_subset_1 X3 k1_numbers)) (\\
& (\lambda X3 : \iota.\lambda X4 : \iota.(\neg r1_xxreal_0 X3 (k17_euclid (k3_matrix_1 \\
& (u1_struct_0 (k15_euclid np_2)) X2 X0 np_1)))) \wedge ((\neg r1_xxreal_0 \\
& (k17_euclid (k3_matrix_1 (u1_struct_0 (k15_euclid np_2)) X2 \\
& (k2_nat_1 X0 np_1) np_1)) X3) \wedge ((\neg r1_xxreal_0 X4 (k18_euclid \\
& (k3_matrix_1 (u1_struct_0 (k15_euclid np_2)) X2 np_1 X1)))) \wedge \\
& (\neg r1_xxreal_0 (k18_euclid (k3_matrix_1 (u1_struct_0 (k15_euclid \\
& np_2)) X2 np_1 (k2_nat_1 X1 np_1))) X4)))) (\lambda X3 : \iota.\lambda X4 : \\
& \iota.k19_euclid X3 X4))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 k5_numbers) \Rightarrow (\forall X2.((v1_matrix_1 X2) \wedge (m2_finseq_1 X2 \\
& (k3_finseq_2 (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow (((v3_goboard1 \\
& X2) \wedge ((r1_xxreal_0 np_1 X0) \wedge ((r1_xxreal_0 X0 (k1_matrix_1 X2)) \wedge \\
& ((r1_xxreal_0 np_1 X1) \wedge (r1_xxreal_0 X1 (k3_finseq_1 X2)))))) \Rightarrow \\
& (k18_euclid (k3_matrix_1 (u1_struct_0 (k15_euclid np_2)) X2 \\
& X1 X0) = k18_euclid (k3_matrix_1 (u1_struct_0 (k15_euclid np_2)) \\
& X2 np_1 X0))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow ((\neg r1_xxreal_0 (k1_nat_1 X1 np_1) X0) \Leftrightarrow (r1_xxreal_0 X0 X1))) \tag{6}$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (r1_xxreal_0 X0 (k2_xcmplx_0 X0 X1))) \tag{7}$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 \ X0) \wedge ((\neg v1_xboole_0 \ X1) \wedge \\ & (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & \ X2 \ X0 \ X1) \Leftrightarrow (m1_subset_1 \ X2 \ X1)) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 \ X1 \ X0) \Leftrightarrow (m1_finseq_1 \ X1 \ X0) \quad (10)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((m1_subset_1 \ X0 \ k5_numbers) \wedge (v7_ordinal1 \\ & \ X1)) \Rightarrow (k2_nat_1 \ X0 \ X1 = k2_xcmplx_0 \ X0 \ X1) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v7_ordinal1 \ X0) \wedge (m1_subset_1 \ X1 \ k5_numbers)) \Rightarrow \\ & (k1_nat_1 \ X0 \ X1 = k2_xcmplx_0 \ X0 \ X1) \end{aligned} \quad (13)$$

Assume the following.

$$(\neg v1_xboole_0 \ k4_ordinal1) \wedge (v3_ordinal1 \ k4_ordinal1) \quad (14)$$

Assume the following.

$$v3_membered \ k1_numbers \quad (15)$$

Assume the following.

$$\neg v1_xboole_0 \ k1_numbers \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m2_finseq_1 \ X1 \ X0) \Rightarrow ((v1_funct_1 \ X1) \wedge (\\ & (v1_finseq_1 \ X1) \wedge (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \\ & \ X0)))))) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_finseq_1 \ X1 \ X0) \Rightarrow ((v1_relat_1 \ X1) \wedge (\\ & (v1_funct_1 \ X1) \wedge (v1_finseq_1 \ X1))) \end{aligned} \quad (18)$$

Assume the following.

$$m1_subset_1 \ k5_numbers \ (k1_zfmisc_1 \ k1_numbers) \quad (19)$$

Assume the following.

$$\forall X0.((v1_relat_1 \ X0) \wedge ((v1_funct_1 \ X0) \wedge (v1_finseq_1 \ X0))) \Rightarrow \\ (m2_subset_1 \ (k3_finseq_1 \ X0) \ k1_numbers \ k5_numbers) \quad (20)$$

Assume the following.

$$\forall X0. \forall X1.((v7_ordinal1 \ X0) \wedge (m1_subset_1 \ X1 \ k5_numbers)) \Rightarrow \\ (m2_subset_1 \ (k1_nat_1 \ X0 \ X1) \ k1_numbers \ k5_numbers) \quad (21)$$

Assume the following.

$$\forall X0.((v1_relat_1 \ X0) \wedge ((v1_funct_1 \ X0) \wedge ((v1_finseq_1 \\ X0) \wedge (v1_matrix_1 \ X0)))) \Rightarrow (m1_subset_1 \ (k1_matrix_1 \ X0) \ k5_numbers) \quad (22)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ (u1_struct_0 \ (k15_euclid \ np_2))) \Rightarrow \\ (m1_subset_1 \ (k18_euclid \ X0) \ k1_numbers) \quad (23)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ (u1_struct_0 \ (k15_euclid \ np_2))) \Rightarrow \\ (m1_subset_1 \ (k17_euclid \ X0) \ k1_numbers) \quad (24)$$

Assume the following.

$$\forall X0. \forall X1.((v1_xxreal_0 \ X0) \wedge (v1_xxreal_0 \ X1)) \Rightarrow (\\ (r1_xxreal_0 \ X0 \ X1) \vee (r1_xxreal_0 \ X1 \ X0)) \quad (25)$$

Assume the following.

$$\forall X0. \forall X1.((m1_subset_1 \ X0 \ k5_numbers) \wedge (v7_ordinal1 \\ X1)) \Rightarrow (k2_nat_1 \ X0 \ X1 = k2_nat_1 \ X1 \ X0) \quad (26)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k4_ordinal1) \Rightarrow (v7_ordinal1 \ X0) \quad (27)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ (k1_zfmisc_1 \ k1_numbers)) \Rightarrow (v3_membered \\ X0) \quad (28)$$

Assume the following.

$$\forall X0.(v3_membered \ X0) \Rightarrow (v2_membered \ X0) \quad (29)$$

Assume the following.

$$\forall X0.(v3_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v1_xreal_0 X1)) \quad (30)$$

Assume the following.

$$\forall X0.(v2_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v1_xreal_0 X1)) \quad (31)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v3_relat_1 X0) \wedge ((v1_matrix_1 X0) \wedge ((v2_goboard1 \\ & X0) \wedge ((v3_goboard1 X0) \wedge ((v4_goboard1 X0) \wedge ((v5_goboard1 X0) \wedge \\ & (m2_finseq_1 X0 (k3_finseq_2 (u1_struct_0 (k15_euclid np_2)))))))))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (\forall X2.(m2_subset_1 X2 k1_numbers k5_numbers) \Rightarrow (\forall X3. \\ & (m2_subset_1 X3 k1_numbers k5_numbers) \Rightarrow (((r1_xreal_0 np_1 \\ & X2) \wedge ((r1_xreal_0 (k2_nat_1 X2 np_1) (k3_finseq_1 X0)) \wedge ((r1_xreal_0 \\ & np_1 X3) \wedge (r1_xreal_0 (k2_nat_1 X3 np_1) (k1_matrix_1 X0)))))) \Rightarrow \\ & ((X1 \in k1_tops_1 (k15_euclid np_2) (k3_goboard5 X0 X2 X3)) \Leftrightarrow ((\neg \\ & r1_xreal_0 (k17_euclid X1) (k17_euclid (k3_matrix_1 (u1_struct_0 \\ & (k15_euclid np_2)) X0 X2 X3))) \wedge ((\neg r1_xreal_0 (k17_euclid (k3_matrix_1 \\ & (u1_struct_0 (k15_euclid np_2)) X0 (k2_nat_1 X2 np_1) X3)) (k17_euclid \\ & X1)) \wedge ((\neg r1_xreal_0 (k18_euclid X1) (k18_euclid (k3_matrix_1 \\ & (u1_struct_0 (k15_euclid np_2)) X0 X2 X3))) \wedge (\neg r1_xreal_0 (k18_euclid \\ & (k3_matrix_1 (u1_struct_0 (k15_euclid np_2)) X0 X2 (k2_nat_1 \\ & X3 np_1))) (k18_euclid X1)))))))))) \end{aligned}$$