

t21_jordan12

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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 $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v1_convex1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_goboard5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. 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 $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Let $k1_matrix_1 : \iota \Rightarrow \iota$ be given. Let $k3_goboard5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k2_goboard2 : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_finseq_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k5_numbers) \Rightarrow (\forall X2.((\neg v3_relat_1 X2) \wedge ((v1_matrix_1 \\ & X2) \wedge ((v2_goboard1 X2) \wedge ((v3_goboard1 X2) \wedge ((v4_goboard1 X2) \wedge \\ & ((v5_goboard1 X2) \wedge (m2_finseq_1 X2 (k3_finseq_2 (u1_struct_0 \\ & (k15_euclid np_2)))))))))) \Rightarrow (((r1_xxreal_0 X0 (k3_finseq_1 \\ & X2)) \wedge (r1_xxreal_0 X1 (k1_matrix_1 X2))) \Rightarrow (v1_convex1 (k3_goboard5 \\ & X2 X0 X1) (k15_euclid np_2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge ((\neg v3_funct_1 X0) \wedge ((v1_finseq_6 \\ & X0 (u1_struct_0 (k15_euclid np_2))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ & X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m2_finseq_1 X0 (u1_struct_0 \\ & (k15_euclid np_2)))))))))) \Rightarrow (\forall X1.(m2_subset_1 X1 k1_numbers \\ & k5_numbers) \Rightarrow (\neg(r1_xxreal_0 np_1 X1) \wedge ((r1_xxreal_0 (k2_nat_1 \\ & X1 np_1) (k3_finseq_1 X0)) \wedge (\forall X2.(m2_subset_1 X2 k1_numbers \\ & k5_numbers) \Rightarrow (\forall X3.(m2_subset_1 X3 k1_numbers k5_numbers) \Rightarrow \\ & (\neg(r1_xxreal_0 X2 (k3_finseq_1 (k2_goboard2 X0))) \wedge ((r1_xxreal_0 \\ & X3 (k1_matrix_1 (k2_goboard2 X0))) \wedge (k3_goboard5 (k2_goboard2 \\ & X0) X2 X3 = k5_goboard5 X0 X1))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (3)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1_xboole_0 X0) \wedge (m1_finseq_1 X0 (u1_struct_0 (\\ & k15_euclid np_2)))) \Rightarrow ((\neg v3_relat_1 (k2_goboard2 X0)) \wedge ((v1_matrix_1 \\ & (k2_goboard2 X0)) \wedge ((v2_goboard1 (k2_goboard2 X0)) \wedge ((v3_goboard1 \\ & (k2_goboard2 X0)) \wedge ((v4_goboard1 (k2_goboard2 X0)) \wedge (v5_goboard1 \\ & (k2_goboard2 X0)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m2_finseq_1 X1 X0) \Rightarrow ((v1_funct_1 X1) \wedge (\\ & (v1_finseq_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\ & X0)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_finseq_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge (\\ & (v1_funct_1 X1) \wedge (v1_finseq_1 X1)) \end{aligned} \quad (7)$$

Assume the following.

$$m1_subset_1 k5_numbers (k1_zfmisc_1 k1_numbers) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1_xboole_0 X0) \wedge (m1_finseq_1 X0 (u1_struct_0 (\\ & k15_euclid np_2)))) \Rightarrow ((v1_matrix_1 (k2_goboard2 X0)) \wedge (m2_finseq_1 \\ & (k2_goboard2 X0) (k3_finseq_2 (u1_struct_0 (k15_euclid np_2)))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge (v4_relat_1 \\ X1 X0)) \Rightarrow ((v1_xboole_0 X1) \wedge ((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v2_finseq_1 X0))) \Rightarrow \\ ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge \\ (v2_finseq_1 X0)))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v2_finseq_1 X0))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ X0)) \Rightarrow (v1_xboole_0 X1)) \end{aligned} \quad (13)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v1_xboole_0 X0) \wedge ((\neg v3_funct_1 X0) \wedge ((v1_finseq_6 \\ X0 (u1_struct_0 (k15_euclid np_2)))) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 \\ X0) \wedge ((v1_goboard5 X0) \wedge ((v2_goboard5 X0) \wedge (m2_finseq_1 X0 (u1_struct_0 \\ (k15_euclid np_2)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 k5_numbers) \Rightarrow \\ (((r1_xxreal_0 np_1 X1) \wedge (r1_xxreal_0 (k2_nat_1 X1 np_1) (k3_finseq_1 \\ X0))) \Rightarrow (v1_convex1 (k5_goboard5 X0 X1) (k15_euclid np_2)))) \end{aligned}$$