

t41_jordan23 (TMEtX-
FATDH5muNvG9ZrdPYMTsnHFpvRadsZ)

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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 $v1_jordan23 : \iota \Rightarrow o$ be given. Let $v1_topreal1 : \iota \Rightarrow o$ be given. Let $v2_topreal1 : \iota \Rightarrow o$ be given. Let $v3_topreal1 : \iota \Rightarrow o$ be given. Let $k3_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v4_topreal1 : \iota \Rightarrow o$ be given. Let $k3_jordan3 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m2_finseq_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\ & (((v1_jordan23 X0) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 X0) \wedge ((v3_topreal1 \\ & X0) \wedge (X1 \in k3_topreal1 np_2 X0)))))) \Rightarrow ((X1 = k1_funct_1 X0 np_1) \vee \\ & (r1_jordan3 (k3_jordan3 X0 X1) (k7_partfun1 (u1_struct_0 (k15_euclid \\ & np_2)) X0 np_1) X1)))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (m1_finseq_1 X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_finseq_1 X1))) \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1_relat_1 X1) \wedge ((v5_relat_1 X1 X0) \wedge (v1_funct_1 X1))) \Rightarrow (m1_subset_1 (k7_partfun1 X0 X1 X2) X0) \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. ((m1_finseq_1 X0 (u1_struct_0 (k15_euclid np_2))) \wedge (m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow (m2_finseq_1 (k3_jordan3 X0 X1) (u1_struct_0 (k15_euclid np_2))) \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m2_finseq_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
& (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
& ((r1_jordan3 X0 X1 X2) \Leftrightarrow ((v4_topreal1 X0) \wedge ((k1_funct_1 X0 np_1 = \\
& \quad X1) \wedge (k1_funct_1 X0 (k3_finseq_1 X0) = X2))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0) \Rightarrow (v5_relat_1 X1 X0) \tag{7}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(m2_finseq_1 X0 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
& (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2))) \Rightarrow \\
& (((v1_jordan23 X0) \wedge ((v1_topreal1 X0) \wedge ((v2_topreal1 X0) \wedge ((v3_topreal1 \\
& \quad X0) \wedge (X1 \in k3_topreal1 np_2 X0)))))) \Rightarrow ((X1 = k1_funct_1 X0 np_1) \vee \\
& \quad (v4_topreal1 (k3_jordan3 X0 X1))))
\end{aligned}$$