

t42_jordan23 (TM-
SnM9HS9CChFvSP6y1pm2erRnVVGkU8V6U)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. 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 $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v4_topreal1 : \iota \Rightarrow o$ be given. Let $k2_jordan3 : \iota \Rightarrow \iota \Rightarrow \iota$ 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. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge (m2_finseq_1 X0 (u1_struct_0 (\\ & \quad k15_euclid np_2)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & \quad (k15_euclid np_2))) \Rightarrow (((v1_jordan23 X0) \wedge ((v1_topreal1 X0) \wedge \\ & \quad ((v2_topreal1 X0) \wedge (v3_topreal1 X0) \wedge (X1 \in k3_topreal1 np_2 X0)))) \Rightarrow \\ & \quad ((X1 = k1_funct_1 X0 (k3_finseq_1 X0)) \vee ((X1 = k1_funct_1 X0 np_1) \vee \\ & \quad (r1_jordan3 (k2_jordan3 X0 X1) X1 (k7_partfun1 (u1_struct_0 (k15_euclid \\ & \quad \quad np_2)) X0 (k3_finseq_1 X0)))))) \end{aligned} \tag{1}$$

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.

$$\begin{aligned} & \forall X0. \forall X1. ((m1_finseq_1 X0 (u1_struct_0 (k15_euclid \\ & \quad np_2))) \wedge (m1_subset_1 X1 (u1_struct_0 (k15_euclid np_2)))) \Rightarrow \\ & (m2_finseq_1 (k2_jordan3 X0 X1) (u1_struct_0 (k15_euclid np_2))) \end{aligned} \quad (5)$$

Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. (m1_finseq_1 X1 X0) \Rightarrow (v5_relat_1 X1 X0) \quad (7)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v1_xboole_0 X0) \wedge (m2_finseq_1 X0 (u1_struct_0 (\\ & \quad k15_euclid np_2)))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ & \quad (k15_euclid np_2)))) \Rightarrow (((v1_jordan23 X0) \wedge ((v1_topreal1 X0) \wedge \\ & \quad ((v2_topreal1 X0) \wedge ((v3_topreal1 X0) \wedge (X1 \in k3_topreal1 np_2 X0)))))) \Rightarrow \\ & ((X1 = k1_funct_1 X0 (k3_finseq_1 X0)) \vee ((X1 = k1_funct_1 X0 np_1) \vee \\ & \quad (v4_topreal1 (k2_jordan3 X0 X1)))) \end{aligned}$$