

t40\_jordan23  
(TMX71Pa5ywTEvG8EN8nrSQbGu6RFi3EKauk)

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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  $r1\_jordan3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_jordan3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_finseq\_5 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k3\_finseq\_5 : \iota \Rightarrow \iota$  be given. Let  $k3\_jordan3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_jordan23 : \iota \Rightarrow o$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_card\_1 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k4\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. (m2\_finseq\_1 X1 X0) \Rightarrow \\ & ((\neg v1\_xboole\_0 X1) \Rightarrow ((k7\_partfun1 X0 X1 np\_1 = k7\_partfun1 X0 ( \\ & k4\_finseq\_5 X0 X1) (k3\_finseq\_1 X1)) \wedge (k7\_partfun1 X0 X1 (k3\_finseq\_1 \\ & X1) = k7\_partfun1 X0 (k4\_finseq\_5 X0 X1) np\_1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow \\ & ((k1\_funct\_1 X0 np\_1 = k1\_funct\_1 (k3\_finseq\_5 X0) (k3\_finseq\_1 \\ & X0)) \wedge (k1\_funct\_1 X0 (k3\_finseq\_1 X0) = k1\_funct\_1 (k3\_finseq\_5 \\ & X0) np\_1)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m2\_finseq\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ & ((v1\_topreal1 X0) \Rightarrow (v1\_topreal1 (k4\_finseq\_5 (u1\_struct\_0 (k15\_euclid \\ & np\_2)) X0))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m2\_finseq\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\
& (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\
& (((v1\_jordan23 X0) \wedge ((v1\_topreal1 X0) \wedge ((v2\_topreal1 X0) \wedge ((v3\_topreal1 \\
& X0) \wedge (X1 \in k3\_topreal1 np\_2 X0)))))) \Rightarrow ((X1 = k1\_funct\_1 X0 np\_1) \vee \\
& (r1\_jordan3 (k3\_jordan3 X0 X1) (k7\_partfun1 (u1\_struct\_0 (k15\_euclid \\
& np\_2)) X0 np\_1) X1))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v1\_xboole\_0 X0) \wedge (m2\_finseq\_1 X0 (u1\_struct\_0 ( \\
& k15\_euclid np\_2)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\
& (k15\_euclid np\_2))) \Rightarrow (((v3\_jordan23 X0) \wedge ((v2\_topreal1 X0) \wedge \\
& ((v3\_topreal1 X0) \wedge (X1 \in k3\_topreal1 np\_2 X0)))) \Rightarrow ((X1 = k1\_funct\_1 \\
& X0 (k3\_finseq\_1 X0)) \vee (k2\_jordan3 (k4\_finseq\_5 (u1\_struct\_0 ( \\
& k15\_euclid np\_2)) X0) X1 = k4\_finseq\_5 (u1\_struct\_0 (k15\_euclid \\
& np\_2)) (k3\_jordan3 X0 X1))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m2\_finseq\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\
& ((v3\_topreal1 X0) \Rightarrow (v3\_topreal1 (k4\_finseq\_5 (u1\_struct\_0 (k15\_euclid \\
& np\_2)) X0)))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m2\_finseq\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\
& ((v2\_topreal1 X0) \Rightarrow (v2\_topreal1 (k4\_finseq\_5 (u1\_struct\_0 (k15\_euclid \\
& np\_2)) X0)))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m2\_finseq\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\
& (k3\_topreal1 np\_2 X0 = k3\_topreal1 np\_2 (k4\_finseq\_5 (u1\_struct\_0 \\
& (k15\_euclid np\_2)) X0))
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m2\_finseq\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\
& (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\
& (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\
& ((r1\_jordan3 X0 X1 X2) \Rightarrow (r1\_jordan3 (k4\_finseq\_5 (u1\_struct\_0 \\
& (k15\_euclid np\_2)) X0) X2 X1))))
\end{aligned} \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1 X1 X0)\Rightarrow(k4\_finseq\_5 X0 X1 = k3\_finseq\_5 X1) \quad (11)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v1\_finseq\_1 X0)))\Rightarrow(k3\_finseq\_1 X0 = k1\_card\_1 X0) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1 X1 X0)\Rightarrow(k4\_finseq\_5 X0 (k4\_finseq\_5 X0 X1) = X1) \quad (13)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge((v1\_finseq\_1 X0)\wedge(v3\_jordan23 X0))))\Rightarrow((v1\_relat\_1 (k3\_finseq\_5 X0))\wedge((v1\_funct\_1 (k3\_finseq\_5 X0))\wedge((v1\_finseq\_1 (k3\_finseq\_5 X0))\wedge(v3\_jordan23 (k3\_finseq\_5 X0)))))) \quad (14)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge((v1\_finseq\_1 X0)\wedge(v1\_jordan23 X0))))\Rightarrow((v1\_relat\_1 (k3\_finseq\_5 X0))\wedge((v1\_funct\_1 (k3\_finseq\_5 X0))\wedge((v1\_finseq\_1 (k3\_finseq\_5 X0))\wedge(v1\_jordan23 (k3\_finseq\_5 X0)))))) \quad (15)$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0 X0)\Rightarrow((\neg v1\_xboole\_0 (k1\_card\_1 X0))\wedge(v1\_card\_1 (k1\_card\_1 X0))) \quad (16)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0)\Rightarrow((v1\_xboole\_0 (k1\_card\_1 X0))\wedge(v1\_card\_1 (k1\_card\_1 X0))) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0)\Rightarrow((v1\_funct\_1 X1)\wedge((v1\_finseq\_1 X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers X0)))))) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1 X1 X0)\Rightarrow((v1\_relat\_1 X1)\wedge((v1\_funct\_1 X1)\wedge(v1\_finseq\_1 X1))) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1 X1)\wedge((v5\_relat\_1 X1 X0)\wedge(v1\_funct\_1 X1)))\Rightarrow(m1\_subset\_1 (k7\_partfun1 X0 X1 X2) X0) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1 X1 X0)\Rightarrow(m2\_finseq\_1 (k4\_finseq\_5 X0 X1) X0) \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_finseq\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2)))\wedge(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid np\_2))))\Rightarrow(m2\_finseq\_1 (k3\_jordan3 X0 X1) (u1\_struct\_0 (k15\_euclid np\_2))) \quad (22)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v1\_finseq\_1 X0)))\Rightarrow((v1\_relat\_1 (k3\_finseq\_5 X0))\wedge((v1\_funct\_1 (k3\_finseq\_5 X0))\wedge(v1\_finseq\_1 (k3\_finseq\_5 X0)))) \quad (23)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v1\_finseq\_1 X0)))\Rightarrow(\forall X1.((v1\_relat\_1 X1)\wedge((v1\_funct\_1 X1)\wedge(v1\_finseq\_1 X1)))\Rightarrow((X1 = k3\_finseq\_5 X0)\Leftrightarrow((k3\_finseq\_1 X1 = k3\_finseq\_1 X0)\wedge(\forall X2.(v7\_ordinal1 X2)\Rightarrow((X2 \in k4\_finseq\_1 X1)\Rightarrow(k1\_funct\_1 X1 X2 = k1\_funct\_1 X0 (k2\_xcmplx\_0 (k6\_xcmplx\_0 (k3\_finseq\_1 X0) X2) np\_1)))))) \quad (24)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0)\Rightarrow(\forall X1.((v1\_relat\_1 X1)\wedge(v5\_relat\_1 X1 X0))\Rightarrow((v1\_xboole\_0 X1)\wedge((v1\_relat\_1 X1)\wedge(v5\_relat\_1 X1 X0)))) \quad (25)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1 X1 X0)\Rightarrow(v5\_relat\_1 X1 X0) \quad (26)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge((v1\_finseq\_1 X0)\wedge(v1\_jordan23 X0))))\Rightarrow((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge((v1\_finseq\_1 X0)\wedge(v3\_jordan23 X0)))) \quad (27)$$

**Theorem 1**

$$\forall X0.((\neg v1\_xboole\_0 X0)\wedge(m2\_finseq\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))))\Rightarrow(\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid np\_2)))\Rightarrow(((v1\_jordan23 X0)\wedge((v1\_topreal1 X0)\wedge((v2\_topreal1 X0)\wedge(v3\_topreal1 X0)\wedge(X1 \in k3\_topreal1 np\_2 X0))))\Rightarrow((X1 = k1\_funct\_1 X0 (k3\_finseq\_1 X0))\vee((X1 = k1\_funct\_1 X0 np\_1)\vee(r1\_jordan3 (k2\_jord3 X0 X1) X1 (k7\_partfun1 (u1\_struct\_0 (k15\_euclid np\_2)) X0 (k3\_finseq\_1 X0))))))$$