

t37\_jordan3 (TMSJzsuRN-  
NGv9gU1H9kx3DQA gC9fQHwGfMv)

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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  $v4\_topreal1 : \iota \Rightarrow o$  be given. Let  $k3\_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_jordan3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_jordan3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m2\_finseq\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ & (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ & (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ & (((v4\_topreal1 X0) \wedge ((X1 \in k3\_topreal1 np\_2 X0) \wedge (X2 \in k3\_topreal1 \\ & np\_2 X0))) \Rightarrow ((X1 = X2) \vee (r1\_jordan3 (k4\_jordan3 X0 X1 X2) X1 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1\_finseq\_1 X0 (u1\_struct\_0 \\ & (k15\_euclid np\_2))) \wedge ((m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid \\ & np\_2))) \wedge (m1\_subset\_1 X2 (u1\_struct\_0 (k15\_euclid np\_2)))))) \Rightarrow \\ & (m2\_finseq\_1 (k4\_jordan3 X0 X1 X2) (u1\_struct\_0 (k15\_euclid np\_2))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2\_finseq\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ & (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ & (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ & ((r1\_jordan3 X0 X1 X2) \Leftrightarrow ((v4\_topreal1 X0) \wedge ((k1\_funct\_1 X0 np\_1 = \\ & X1) \wedge (k1\_funct\_1 X0 (k3\_finseq\_1 X0) = X2)))))) \end{aligned} \quad (4)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m2\_finseq\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ & (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ & (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ & (((v4\_topreal1 X0) \wedge ((X1 \in k3\_topreal1 np\_2 X0) \wedge (X2 \in k3\_topreal1 \\ & np\_2 X0))) \Rightarrow ((X1 = X2) \vee (v4\_topreal1 (k4\_jordan3 X0 X1 X2)))))) \end{aligned}$$