

# t9\_jordan3 (TMLZK- sjeFdCa1DcDZs9UZhVwA5UPMrC52cS)

October 27, 2020

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  $k3\_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_jordan3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Let  $k6\_seq\_4 : \iota \Rightarrow \iota$  be given. Let  $k2\_xxreal\_2 : \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v1\_xxreal\_2 : \iota \Rightarrow o$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v2\_membered : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc1 : \iota \Rightarrow \iota$  be given. Let  $v3\_membered : \iota \Rightarrow o$  be given. Let  $v4\_membered : \iota \Rightarrow o$  be given. Let  $v5\_membered : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. (m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \quad (1)$$

Assume the following.

$$\forall X0. ((\neg v1\_xboole\_0 X0) \wedge (v6\_membered X0)) \Rightarrow (k6\_seq\_4 X0 = k2\_xxreal\_2 X0) \quad (2)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (3)$$

Assume the following.

$$\forall X0. ((v6\_membered X0) \wedge (v1\_xxreal\_2 X0)) \Rightarrow ((v1\_xxreal\_0 (k2\_xxreal\_2 X0)) \wedge (v7\_ordinal1 (k2\_xxreal\_2 X0))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. ((m1\_finseq\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid np\_2)))) \Rightarrow (m1\_subset\_1 (k1\_jordan3 X0 X1) k5\_numbers) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v2\_membered\ X0) \wedge (v1\_xxreal\_2\ X0)) \Rightarrow (\forall X1. \\ & (v1\_xxreal\_0\ X1) \Rightarrow ((X1 = k2\_xxreal\_2\ X0) \Leftrightarrow ((X1 \in X0) \wedge (\forall X2. \\ & (v1\_xxreal\_0\ X2) \Rightarrow ((X2 \in X0) \Rightarrow (r1\_xxreal\_0\ X1\ X2)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2\_finseq\_1\ X0\ (u1\_struct\_0\ (k15\_euclid\ np\_2))) \Rightarrow \\ & (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ (k15\_euclid\ np\_2))) \Rightarrow \\ & ((X1 \in k3\_topreal1\ np\_2\ X0) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ k5\_numbers) \Rightarrow \\ & ((X2 = k1\_jordan3\ X0\ X1) \Leftrightarrow (\exists X3.((\neg v1\_xboole\_0\ X3) \wedge (m1\_subset\_1 \\ & X3\ (k1\_zfmisc\_1\ k5\_numbers))) \wedge ((X2 = k6\_seq\_4\ X3) \wedge (X3 = ReplSep \\ & (toset\ (\lambda X4 : \iota.m1\_subset\_1\ X4\ k5\_numbers))\ (\lambda X4 : \iota. \\ & X1 \in k2\_topreal1\ np\_2\ X0\ X4)\ (\lambda X4 : \iota.X4))))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(v3\_membered\ X0) \Rightarrow (v2\_membered\ X0) \quad (8)$$

Assume the following.

$$\forall X0.((v6\_membered\ X0) \wedge (\neg v1\_xboole\_0\ X0)) \Rightarrow ((v6\_membered\ X0) \wedge ((\neg v1\_xboole\_0\ X0) \wedge (v1\_xxreal\_2\ X0))) \quad (9)$$

Assume the following.

$$\forall X0.(v4\_membered\ X0) \Rightarrow (v3\_membered\ X0) \quad (10)$$

Assume the following.

$$\forall X0.(v5\_membered\ X0) \Rightarrow (v4\_membered\ X0) \quad (11)$$

Assume the following.

$$\forall X0.(v6\_membered\ X0) \Rightarrow (v5\_membered\ X0) \quad (12)$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k5\_numbers)) \Rightarrow (v6\_membered\ X0) \quad (13)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m2\_finseq\_1\ X0\ (u1\_struct\_0\ (k15\_euclid\ np\_2))) \Rightarrow \\ & (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ (k15\_euclid\ np\_2))) \Rightarrow \\ & ((X1 \in k3\_topreal1\ np\_2\ X0) \Rightarrow (X1 \in k2\_topreal1\ np\_2\ X0\ (k1\_jordan3 \\ & X0\ X1)))) \end{aligned}$$