

# t3\_jordan12 (TMQKTbZjBeR- fQN33YV9BDnfGEWjEsR2S8VY)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  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  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k7\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_finseq\_1 : \iota \Rightarrow o$  be given. Let  $k1\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow ((X0 \in k9\_xtuple\_0 X1) \Rightarrow (k1\_funct\_1 X1 X0 \in k10\_xtuple\_0 X1)) \quad (1)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow (\forall X1. ((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 X1))) \Rightarrow (((r1\_xxreal\_0 np\_1 X0) \wedge (r1\_xxreal\_0 (k1\_nat\_1 X0 np\_1) (k3\_finseq\_1 X1))) \Rightarrow ((X0 \in k4\_finseq\_1 X1) \wedge (k1\_nat\_1 X0 np\_1 \in k4\_finseq\_1 X1))) \wedge (((X0 \in k4\_finseq\_1 X1) \wedge (k1\_nat\_1 X0 np\_1 \in k4\_finseq\_1 X1)) \Rightarrow ((r1\_xxreal\_0 np\_1 X0) \wedge (r1\_xxreal\_0 (k1\_nat\_1 X0 np\_1) (k3\_finseq\_1 X1)))))) \quad (2)$$

Assume the following.

$$((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \quad (4)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (5)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow (k4\_finseq\_1 X0 = k9\_xtuple\_0 X0) \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. ((m1\_subset\_1 X0 k5\_numbers) \wedge (v7\_ordinal1 X1)) \Rightarrow (k2\_nat\_1 X0 X1 = k2\_xcmplx\_0 X0 X1) \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. ((v7\_ordinal1 X0) \wedge (m1\_subset\_1 X1 k5\_numbers)) \Rightarrow (k1\_nat\_1 X0 X1 = k2\_xcmplx\_0 X0 X1) \quad (8)$$

Assume the following.

$$v6\_membered k4\_ordinal1 \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. (m2\_finseq\_1 X1 X0) \Rightarrow ((v1\_funct\_1 X1) \wedge ((v1\_finseq\_1 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers X0)))))) \quad (10)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_finseq\_1 X1 X0) \Rightarrow ((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 X1))) \quad (11)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge ((v5\_relat\_1 X1 X0) \wedge (v1\_funct\_1 X1))) \Rightarrow (\forall X2. (X2 \in k9\_xtuple\_0 X1) \Rightarrow (k7\_partfun1 X0 X1 X2 = k1\_funct\_1 X1 X2)) \quad (12)$$

Assume the following.

$$\forall X0. \forall X1. ((v7\_ordinal1 X0) \wedge (m1\_subset\_1 X1 k5\_numbers)) \Rightarrow (k1\_nat\_1 X0 X1 = k1\_nat\_1 X1 X0) \quad (13)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_finseq\_1 X1 X0) \Rightarrow (v5\_relat\_1 X1 X0) \quad (14)$$

Assume the following.

$$\forall X0. (v6\_membered X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 X0) \Rightarrow (v7\_ordinal1 X1)) \quad (15)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m2\_finseq\_1 \\ & X1 (u1\_struct\_0 (k15\_euclid X0))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 \\ & k5\_numbers) \Rightarrow (((r1\_xxreal\_0 np\_1 X2) \wedge (r1\_xxreal\_0 (k2\_nat\_1 \\ & X2 np\_1) (k3\_finseq\_1 X1))) \Rightarrow ((k7\_partfun1 (u1\_struct\_0 (k15\_euclid \\ & X0)) X1 X2 \in k10\_xtuple\_0 X1) \wedge (k7\_partfun1 (u1\_struct\_0 (k15\_euclid \\ & X0)) X1 (k2\_nat\_1 X2 np\_1) \in k10\_xtuple\_0 X1)))))) \end{aligned}$$