

t28\_jordan1b (TM-  
cBxdbpg5BPVyX9WfutXcxzQXdKm95CaEU)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v1\_topreal2 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  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  $r2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_rltopsp1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_jordan8 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_jordan1a : \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k9\_jordan6 : \iota \Rightarrow \iota$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  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  $np\_3 : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $np\_4 : \iota$  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  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_matrix\_1 : \iota \Rightarrow o$  be given. Let  $k3\_finseq\_2 : \iota \Rightarrow \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $v2\_compts\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xxreal\_0 X2) \Rightarrow (((r1\_xxreal\_0 X0 X1) \wedge (r1\_xxreal\_0 X1 X2)) \Rightarrow \\ & (r1\_xxreal\_0 X0 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.((v1\_topreal2 \\ & X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2)))))) \Rightarrow \\ & (\forall X2.(m1\_subset\_1 X2 k5\_numbers) \Rightarrow (\neg(\neg r1\_xxreal\_0 X2 np\_1) \wedge \\ & ((\neg r1\_xxreal\_0 (k3\_finseq\_1 (k1\_jordan8 X1 X0)) X2) \wedge (r2\_subset\_1 \\ & (k1\_rltopsp1 (k15\_euclid np\_2) (k3\_matrix\_1 (u1\_struct\_0 (k15\_euclid \\ & np\_2)) (k1\_jordan8 X1 X0) X2 np\_1) (k3\_matrix\_1 (u1\_struct\_0 \\ & (k15\_euclid np\_2)) (k1\_jordan8 X1 X0) X2 (k3\_finseq\_1 (k1\_jordan8 \\ & X1 X0)))) (k9\_jordan6 X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow \\ & (\neg(r1\_xxreal\_0 np\_3 (k3\_finseq\_1 X0)) \wedge (r1\_xxreal\_0 (k3\_finseq\_1 \\ & X0) (k1\_jordan1a X0))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow \\ & (\neg(r1\_xxreal\_0 np\_2 (k3\_finseq\_1 X0)) \wedge (r1\_xxreal\_0 (k1\_jordan1a \\ & X0) np\_1)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1\_xboole\_0 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 ( \\ & u1\_struct\_0 (k15\_euclid np\_2)))))) \Rightarrow (\forall X1.(v7\_ordinal1 \\ & X1) \Rightarrow (r1\_xxreal\_0 np\_4 (k3\_finseq\_1 (k1\_jordan8 X0 X1)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_4) \wedge (m2\_subset\_1 np\_4 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_4 k5\_numbers) \wedge (m1\_subset\_1 np\_4 k1\_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_3) \wedge (m2\_subset\_1 np\_3 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_3 k5\_numbers) \wedge (m1\_subset\_1 np\_3 k1\_numbers)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_2) \wedge (m2\_subset\_1 np\_2 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_2 k5\_numbers) \wedge (m1\_subset\_1 np\_2 k1\_numbers)) \end{aligned} \quad (8)$$

Assume the following.

$$r1\_xxreal\_0 np\_3 np\_4 \quad (9)$$

Assume the following.

$$r1\_xxreal\_0 np\_2 np\_4 \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2. (m2\_subset\_1 \\ & X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0. \forall X1. (m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \quad (12)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (13)$$

Assume the following.

$$(\neg v1\_xboole\_0 \ k4\_ordinal1) \wedge (v3\_ordinal1 \ k4\_ordinal1) \quad (14)$$

Assume the following.

$$\neg v1\_xboole\_0 \ k1\_numbers \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((\neg v1\_xboole\_0 \ X0) \wedge ((\neg v1\_xboole\_0 \ X1) \wedge \\ (m1\_subset\_1 \ X1 \ (k1\_zfmisc\_1 \ X0)))) \Rightarrow (\forall X2. (m2\_subset\_1 \\ X2 \ X0 \ X1) \Rightarrow (m1\_subset\_1 \ X2 \ X0)) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (m2\_finseq\_1 \ X1 \ X0) \Rightarrow ((v1\_funct\_1 \ X1) \wedge ( \\ (v1\_finseq\_1 \ X1) \wedge (m1\_subset\_1 \ X1 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ k5\_numbers \\ X0)))))) \end{aligned} \quad (17)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_finseq\_1 \ X1 \ X0) \Rightarrow ((v1\_relat\_1 \ X1) \wedge ( \\ (v1\_funct\_1 \ X1) \wedge (v1\_finseq\_1 \ X1))) \quad (18)$$

Assume the following.

$$m1\_subset\_1 \ k5\_numbers \ (k1\_zfmisc\_1 \ k1\_numbers) \quad (19)$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 \ X0) \wedge ((v1\_funct\_1 \ X0) \wedge (v1\_finseq\_1 \ X0))) \Rightarrow \\ (m2\_subset\_1 \ (k3\_finseq\_1 \ X0) \ k1\_numbers \ k5\_numbers) \quad (20)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((m1\_subset\_1 \ X0 \ (k1\_zfmisc\_1 \ (u1\_struct\_0 \\ (k15\_euclid \ np\_2)))) \wedge (v7\_ordinal1 \ X1)) \Rightarrow ((v1\_matrix\_1 \ (k1\_jordan8 \\ X0 \ X1)) \wedge (m2\_finseq\_1 \ (k1\_jordan8 \ X0 \ X1) \ (k3\_finseq\_2 \ (u1\_struct\_0 \\ (k15\_euclid \ np\_2)))))) \end{aligned} \quad (21)$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 \ X0) \wedge ((v1\_funct\_1 \ X0) \wedge (v1\_finseq\_1 \ X0))) \Rightarrow \\ (m2\_subset\_1 \ (k1\_jordan1a \ X0) \ k1\_numbers \ k5\_numbers) \quad (22)$$

Assume the following.

$$\forall X0. (m1\_subset\_1 \ X0 \ k4\_ordinal1) \Rightarrow (v7\_ordinal1 \ X0) \quad (23)$$

Assume the following.

$$\forall X0. (v1\_xreal\_0 \ X0) \Rightarrow (v1\_xxreal\_0 \ X0) \quad (24)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers)\Rightarrow(v1\_xreal\_0 X0) \quad (25)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2))))\Rightarrow((v1\_topreal2 X0)\Rightarrow((\neg v1\_xboole\_0 X0)\wedge(v2\_compts\_1 X0 (k15\_euclid np\_2)))) \quad (26)$$

**Theorem 1**

$$\begin{aligned} &\forall X0.(m1\_subset\_1 X0 k5\_numbers)\Rightarrow(\forall X1.((v1\_topreal2 \\ &X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2))))\Rightarrow \\ &(\neg r2\_subset\_1 (k1\_rltopsp1 (k15\_euclid np\_2) (k3\_matrix\_1 ( \\ &u1\_struct\_0 (k15\_euclid np\_2)) (k1\_jordan8 X1 X0) (k1\_jordan1a \\ &(k1\_jordan8 X1 X0)) np\_1) (k3\_matrix\_1 (u1\_struct\_0 (k15\_euclid \\ &np\_2)) (k1\_jordan8 X1 X0) (k1\_jordan1a (k1\_jordan8 X1 X0)) (k3\_finseq\_1 \\ &(k1\_jordan8 X1 X0)))) (k9\_jordan6 X1))) \end{aligned}$$