

## t32\_jordan1a

(TMSn4dmUDYA7Cgz3LfCyNBE5sLttA45yGmL)

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Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  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  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $k1\_matrix\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_jordan8 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k13\_newton : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_nat\_d : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_matrix\_1 : \iota \Rightarrow o$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_finseq\_2 : \iota \Rightarrow \iota$  be given. Let  $k1\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_newton : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_3 : \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_matrix\_1 : \iota \Rightarrow \iota$  be given. Let  $k3\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k19\_euclid : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_pscomp\_1 : \iota \Rightarrow \iota$  be given. Let  $k4\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k13\_complex1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_pscomp\_1 : \iota \Rightarrow \iota$  be given. Let  $k5\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_pscomp\_1 : \iota \Rightarrow \iota$  be given. Let  $k7\_pscomp\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1. \\
 & (m2\_subset\_1 X1 k1\_numbers k5\_numbers) \Rightarrow (\forall X2.(m2\_subset\_1 \\
 & X2 k1\_numbers k5\_numbers) \Rightarrow (\forall X3.((\neg v1\_xboole\_0 X3) \wedge (m1\_subset\_1 \\
 & X3 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2)))))) \Rightarrow ((r1\_xxreal\_0 \\
 & X0 X1) \Rightarrow ((r1\_xxreal\_0 X2 np\_1) \vee ((r1\_xxreal\_0 (k3\_finseq\_1 (k1\_jordan8 \\
 & X3 X0)) X2) \vee ((\neg r1\_xxreal\_0 (k7\_real\_1 (k8\_real\_1 (k13\_newton \\
 & np\_2 (k7\_nat\_d X1 X0)) (k9\_real\_1 X2 np\_2)) np\_2) np\_1) \wedge (\neg r1\_xxreal\_0 \\
 & (k3\_finseq\_1 (k1\_jordan8 X3 X1)) (k7\_real\_1 (k8\_real\_1 (k13\_newton \\
 & np\_2 (k7\_nat\_d X1 X0)) (k9\_real\_1 X2 np\_2)) np\_2)))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.\forall X1.((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge \\
 & (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2.(m2\_subset\_1 \\
 & X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1))
 \end{aligned} \tag{2}$$

Assume the following.

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

Assume the following.

$$(\neg v1\_xboole\_0 \ k4\_ordinal1) \wedge (v3\_ordinal1 \ k4\_ordinal1) \quad (4)$$

Assume the following.

$$\neg v1\_xboole\_0 \ k1\_numbers \quad (5)$$

Assume the following.

$$m1\_subset\_1 \ k5\_numbers \ (k1\_zfmisc\_1 \ k1\_numbers) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((m1\_subset\_1 \ X0 \ (k1\_zfmisc\_1 \ (u1\_struct\_0 \\ & \ (k15\_euclid \ np\_2)))) \wedge (v7\_ordinal1 \ X1)) \Rightarrow ((v1\_matrix\_1 \ (k1\_jordan8 \\ & \ X0 \ X1)) \wedge (m2\_finseq\_1 \ (k1\_jordan8 \ X0 \ X1) \ (k3\_finseq\_2 \ (u1\_struct\_0 \\ & \ (k15\_euclid \ np\_2)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1\_subset\_1 \ X0 \ (k1\_zfmisc\_1 \ (u1\_struct\_0 \ (k15\_euclid \\ & \ np\_2)))) \Rightarrow (\forall X1. (v7\_ordinal1 \ X1) \Rightarrow (\forall X2. ((v1\_matrix\_1 \\ & \ X2) \wedge (m2\_finseq\_1 \ X2 \ (k3\_finseq\_2 \ (u1\_struct\_0 \ (k15\_euclid \ np\_2)))))) \Rightarrow \\ & \ ((X2 = k1\_jordan8 \ X0 \ X1) \Leftrightarrow ((k3\_finseq\_1 \ X2 = k1\_nat\_1 \ (k2\_newton \\ & \ np\_2 \ X1) \ np\_3) \wedge ((k3\_finseq\_1 \ X2 = k1\_matrix\_1 \ X2) \wedge (\forall X3. \\ & \ (v7\_ordinal1 \ X3) \Rightarrow (\forall X4. (v7\_ordinal1 \ X4) \Rightarrow ((k4\_tarski \ X3 \\ & \ X4 \in k2\_matrix\_1 \ X2) \Rightarrow (k3\_matrix\_1 \ (u1\_struct\_0 \ (k15\_euclid \ np\_2)) \\ & \ X2 \ X3 \ X4 = k19\_euclid \ (k7\_real\_1 \ (k6\_pscomp\_1 \ X0) \ (k4\_real\_1 \ (k13\_complex1 \\ & \ (k9\_real\_1 \ (k8\_pscomp\_1 \ X0) \ (k6\_pscomp\_1 \ X0)) \ (k2\_newton \ np\_2 \\ & \ X1)) \ (k5\_real\_1 \ X3 \ np\_2))) \ (k7\_real\_1 \ (k9\_pscomp\_1 \ X0) \ (k4\_real\_1 \\ & \ (k13\_complex1 \ (k9\_real\_1 \ (k7\_pscomp\_1 \ X0) \ (k9\_pscomp\_1 \ X0)) \ ( \\ & \ k2\_newton \ np\_2 \ X1)) \ (k5\_real\_1 \ X4 \ np\_2)))))))))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0. (m1\_subset\_1 \ X0 \ k4\_ordinal1) \Rightarrow (v7\_ordinal1 \ X0) \quad (9)$$

**Theorem 1**

$$\begin{aligned} & \forall X0. (m2\_subset\_1 \ X0 \ k1\_numbers \ k5\_numbers) \Rightarrow (\forall X1. \\ & \ (m2\_subset\_1 \ X1 \ k1\_numbers \ k5\_numbers) \Rightarrow (\forall X2. (m2\_subset\_1 \\ & \ X2 \ k1\_numbers \ k5\_numbers) \Rightarrow (\forall X3. ((\neg v1\_xboole\_0 \ X3) \wedge (m1\_subset\_1 \\ & \ X3 \ (k1\_zfmisc\_1 \ (u1\_struct\_0 \ (k15\_euclid \ np\_2)))))) \Rightarrow ((r1\_xxreal\_0 \\ & \ X0 \ X1) \Rightarrow ((r1\_xxreal\_0 \ X2 \ np\_1) \vee ((r1\_xxreal\_0 \ (k1\_matrix\_1 \ (k1\_jordan8 \\ & \ X3 \ X0)) \ X2) \vee ((\neg r1\_xxreal\_0 \ (k7\_real\_1 \ (k8\_real\_1 \ (k13\_newton \\ & \ np\_2 \ (k7\_nat\_d \ X1 \ X0)) \ (k9\_real\_1 \ X2 \ np\_2)) \ np\_2) \ np\_1) \wedge (\neg r1\_xxreal\_0 \\ & \ (k1\_matrix\_1 \ (k1\_jordan8 \ X3 \ X1)) \ (k7\_real\_1 \ (k8\_real\_1 \ (k13\_newton \\ & \ np\_2 \ (k7\_nat\_d \ X1 \ X0)) \ (k9\_real\_1 \ X2 \ np\_2)) \ np\_2)))))) \end{aligned}$$