

## t23\_jordan17

(TMd5enk1SwHt4wVfj5Tr8ADaZqYnLReGYEG)

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Let  $v1\_topreal2 : \iota \Rightarrow o$  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  $r1\_jordan17 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_jordan6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid \\ np\_2)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid \\ np\_2))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 (k15\_euclid \\ np\_2))) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 (k15\_euclid \\ np\_2)))) \Rightarrow (((v1\_topreal2 X0) \wedge ((r1\_jordan6 X0 X1 X2) \wedge (r1\_jordan6 \\ X0 X2 X3))) \Rightarrow (r1\_jordan6 X0 X1 X3)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid \\ np\_2)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid \\ np\_2))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 (k15\_euclid \\ np\_2))) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 (k15\_euclid \\ np\_2)))) \Rightarrow (((v1\_topreal2 X0) \wedge ((r1\_jordan6 X0 X1 X2) \wedge (r1\_jordan6 \\ X0 X2 X1))) \Rightarrow (X1 = X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid \\ np\_2)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid \\ np\_2))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 (k15\_euclid \\ np\_2))) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 (k15\_euclid \\ np\_2))) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 (k15\_euclid \\ np\_2)))) \Rightarrow ((r1\_jordan17 X0 X1 X2 X3 X4) \Leftrightarrow (\neg(\neg(r1\_jordan6 X0 X1 X2) \wedge \\ ((r1\_jordan6 X0 X2 X3) \wedge (r1\_jordan6 X0 X3 X4))) \wedge (\neg(r1\_jordan6 \\ X0 X2 X3) \wedge (r1\_jordan6 X0 X3 X4) \wedge (r1\_jordan6 X0 X4 X1))) \wedge (\neg(r1\_jordan6 \\ X0 X3 X4) \wedge (r1\_jordan6 X0 X4 X1) \wedge (r1\_jordan6 X0 X1 X2))) \wedge (\neg(r1\_jordan6 \\ X0 X4 X1) \wedge (r1\_jordan6 X0 X1 X2) \wedge (r1\_jordan6 X0 X2 X3)))))))))) \end{aligned} \quad (3)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v1\_topreal2\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (u1\_struct\_0 \\ & \quad (k15\_euclid\ np\_2))))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0 \\ & \quad (k15\_euclid\ np\_2))))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0 \\ & \quad (k15\_euclid\ np\_2))))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0 \\ & \quad (k15\_euclid\ np\_2))))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0 \\ & \quad (k15\_euclid\ np\_2))))\Rightarrow(((r1\_jordan17\ X0\ X1\ X2\ X3\ X4)\wedge(r1\_jordan17 \\ & \quad X0\ X4\ X2\ X3\ X1))\Rightarrow((X1 = X2)\vee((X1 = X3)\vee((X2 = X4)\vee(X1 = X4)))))) \end{aligned}$$