

## t4\_jordan17

(TMWKJ3K7BvJqWuUKQEQvCUCj9no59zDzGf4)

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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  $r1\_jordan6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k22\_pscomp\_1 : \iota \Rightarrow \iota$  be given. Let  $k9\_jordan6 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v2\_compts\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k18\_pscomp\_1 : \iota \Rightarrow \iota$  be given. Let  $k8\_jordan6 : \iota \Rightarrow \iota$  be given. Let  $r1\_jordan5c : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1\_xboole\_0 X0) \wedge ((v2\_compts\_1 X0 (k15\_euclid np\_2)) \wedge \\ & \quad (m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2)))))) \Rightarrow \\ & \quad ((v1\_topreal2 X0) \Rightarrow ((k18\_pscomp\_1 X0 \in k9\_jordan6 X0) \wedge ((k22\_pscomp\_1 \\ & \quad X0 \in k9\_jordan6 X0) \wedge ((k18\_pscomp\_1 X0 \in k8\_jordan6 X0) \wedge (k22\_pscomp\_1 \\ & \quad X0 \in k8\_jordan6 X0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1\_xboole\_0 X0) \wedge ((v2\_compts\_1 X0 (k15\_euclid np\_2)) \wedge \\ & \quad (m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2)))))) \Rightarrow \\ & \quad (\neg (v1\_topreal2 X0) \wedge (k18\_pscomp\_1 X0 = k22\_pscomp\_1 X0)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid \\ & \quad np\_2)))) \Rightarrow (m1\_subset\_1 (k22\_pscomp\_1 X0) (u1\_struct\_0 (k15\_euclid \\ & \quad np\_2))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid \\
& \quad np\_2)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid \\
& \quad np\_2)))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 (k15\_euclid \\
& \quad np\_2)))) \Rightarrow ((r1\_jordan6 X0 X1 X2) \Leftrightarrow (\neg(\neg(X1 \in k8\_jordan6 X0) \wedge ((X2 \in \\
& \quad k9\_jordan6 X0) \wedge (X2 \neq k18\_pscomp\_1 X0))) \wedge (\neg(X1 \in k8\_jordan6 X0) \wedge \\
& \quad ((X2 \in k8\_jordan6 X0) \wedge (r1\_jordan5c (k8\_jordan6 X0) (k18\_pscomp\_1 \\
& \quad X0) (k22\_pscomp\_1 X0) X1 X2)))) \wedge (\neg(X1 \in k9\_jordan6 X0) \wedge ((X2 \in k9\_jordan6 \\
& \quad X0) \wedge ((X2 \neq k18\_pscomp\_1 X0) \wedge (r1\_jordan5c (k9\_jordan6 X0) (k22\_pscomp\_1 \\
& \quad X0) (k18\_pscomp\_1 X0) X1 X2))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid \\
& \quad np\_2)))) \Rightarrow ((v1\_topreal2 X0) \Rightarrow ((\neg v1\_xboole\_0 X0) \wedge (v2\_compts\_1 \\
& \quad X0 (k15\_euclid np\_2))))
\end{aligned} \tag{6}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((v1\_topreal2 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 \\
& \quad (k15\_euclid np\_2)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\
& \quad (k15\_euclid np\_2)))) \Rightarrow ((r1\_jordan6 X0 (k22\_pscomp\_1 X0) X1) \Rightarrow ( \\
& \quad X1 \in k9\_jordan6 X0))
\end{aligned}$$