

# t8\_jordan7 (TMGm- cWnY4uYRhaPBJMxrrwupYS9VuczhQt1)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v2\_compts\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k15\_euclid : \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  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  $v1\_topreal2 : \iota \Rightarrow o$  be given. Let  $k18\_pscomp\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_jordan7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $r1\_jordan6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

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

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1\_tarski X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v1\_xboole\_0 X0) \wedge ((v2\_compts\_1 X0 (k15\_euclid np\_2)) \wedge \\
& (m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2)))))) \Rightarrow \\
& (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\
& (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\
& (((X2 \neq k18\_pscomp\_1 X0) \Rightarrow (k1\_jordan7 X0 X1 X2 = ReplSep (toset (\lambda X3 : \\
& \iota.m1\_subset\_1 X3 (u1\_struct\_0 (k15\_euclid np\_2)))) (\lambda X3 : \\
& \iota.(r1\_jordan6 X0 X1 X3) \wedge (r1\_jordan6 X0 X3 X2)) (\lambda X3 : \iota.X3)))) \wedge \\
& ((X2 = k18\_pscomp\_1 X0) \Rightarrow (k1\_jordan7 X0 X1 X2 = ReplSep (toset (\lambda X3 : \\
& \iota.m1\_subset\_1 X3 (u1\_struct\_0 (k15\_euclid np\_2)))) (\lambda X3 : \\
& \iota.(r1\_jordan6 X0 X1 X3) \vee ((X1 \in X0) \wedge (X3 = k18\_pscomp\_1 X0)) (\lambda X3 : \\
& \iota.X3))))))
\end{aligned} \tag{5}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((\neg v1\_xboole\_0 X0) \wedge ((v2\_compts\_1 X0 (k15\_euclid np\_2)) \wedge \\
& (m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2)))))) \Rightarrow \\
& (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\
& (((v1\_topreal2 X0) \wedge (X1 \in X0)) \Rightarrow ((X1 = k18\_pscomp\_1 X0) \vee (k1\_jordan7 \\
& X0 X1 X1 = k1\_tarSKI X1))))
\end{aligned}$$