

## t40\_jordan21

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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  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_pscomp\_1 : \iota \Rightarrow \iota$  be given. Let  $k18\_euclid : \iota \Rightarrow \iota$  be given. Let  $k2\_jordan21 : \iota \Rightarrow \iota$  be given. Let  $v2\_compts\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_jordan21 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k6\_pscomp\_1 : \iota \Rightarrow \iota$  be given. Let  $k17\_euclid : \iota \Rightarrow \iota$  be given. Let  $k8\_pscomp\_1 : \iota \Rightarrow \iota$  be given. Let  $k7\_pscomp\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v2\_compts\_1 X0 (k15\_euclid np\_2)) \wedge ((v1\_jordan21 \\ & X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2)))))) \Rightarrow \\ & (k2\_jordan21 X0 \in X0) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ & (\forall X1.((\neg v1\_xboole\_0 X1) \wedge ((v2\_compts\_1 X1 (k15\_euclid \\ & np\_2)) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid \\ & np\_2)))))) \Rightarrow ((X0 \in X1) \Rightarrow ((r1\_xxreal\_0 (k6\_pscomp\_1 X1) (k17\_euclid \\ & X0)) \wedge ((r1\_xxreal\_0 (k17\_euclid X0) (k8\_pscomp\_1 X1)) \wedge ((r1\_xxreal\_0 \\ & (k9\_pscomp\_1 X1) (k18\_euclid X0)) \wedge (r1\_xxreal\_0 (k18\_euclid X0) \\ & (k7\_pscomp\_1 X1)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2)))) \Rightarrow (m1\_subset\_1 (k2\_jordan21 X0) (u1\_struct\_0 (k15\_euclid np\_2))) \tag{3}$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2)))) \Rightarrow ((v1\_topreal2 X0) \Rightarrow ((v1\_topreal2 X0) \wedge (v1\_jordan21 X0))) \tag{4}$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2)))) \Rightarrow ((v1\_topreal2 X0) \Rightarrow ((-v1\_xboole\_0 X0) \wedge (v2\_compts\_1 X0 (k15\_euclid np\_2)))) \quad (5)$$

**Theorem 1**

$$\forall X0.((v1\_topreal2 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2)))))) \Rightarrow (r1\_xxreal\_0 (k9\_pscomp\_1 X0) (k18\_euclid (k2\_jordan21 X0)))$$