

## t15\_jordan16

(TMTLwu2oUYVqEJAtb44Adam8Zyb9P2VXwEb)

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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  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $r1\_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k18\_pscomp\_1 : \iota \Rightarrow \iota$  be given. Let  $k22\_pscomp\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_jordan6 : \iota \Rightarrow \iota$  be given. Let  $k8\_jordan6 : \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v2\_compts\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 (u1\_struct\_0 (k15\_euclid X0))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 \\ & (u1\_struct\_0 (k15\_euclid X0))) \Rightarrow (\forall X3.(m1\_subset\_1 X3 ( \\ & k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid X0)))) \Rightarrow ((r1\_topreal1 ( \\ & k15\_euclid X0) X1 X2 X3) \Rightarrow (v2\_compts\_1 X3 (k15\_euclid X0)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1\_xboole\_0 X0) \wedge ((v2\_compts\_1 X0 (k15\_euclid np\_2)) \wedge \\ & (m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2)))))) \Rightarrow \\ & (\forall X1.((\neg v1\_xboole\_0 X1) \wedge ((v2\_compts\_1 X1 (k15\_euclid \\ & np\_2)) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid \\ & np\_2)))))) \Rightarrow (\neg (v1\_topreal2 X0) \wedge ((r1\_topreal1 (k15\_euclid np\_2) \\ & (k18\_pscomp\_1 X0) (k22\_pscomp\_1 X0) X1) \wedge ((r1\_tarski X1 X0) \wedge (( \\ & X1 \neq k8\_jordan6 X0) \wedge (X1 \neq k9\_jordan6 X0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_2) \wedge (m2\_subset\_1 np\_2 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_2 k5\_numbers) \wedge (m1\_subset\_1 np\_2 k1\_numbers)) \end{aligned} \quad (3)$$

Assume the following.

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

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2)))) \Rightarrow (m1\_subset\_1 (k18\_pscomp\_1 X0) (u1\_struct\_0 (k15\_euclid np\_2))) \quad (5)$$

Assume the following.

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

**Theorem 1**

$$\forall X0.((v1\_topreal2 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2)))))) \Rightarrow (\forall X1.((\neg v1\_xboole\_0 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2)))))) \Rightarrow (\neg (r1\_topreal1 (k15\_euclid np\_2) (k18\_pscomp\_1 X0) (k22\_pscomp\_1 X0) X1) \wedge ((r1\_tarski X1 X0) \wedge ((X1 \neq k9\_jordan6 X0) \wedge (X1 \neq k8\_jordan6 X0))))))$$