

## t15\_jordan17

(TMGkGyTiffvuSJRvZvKz64n2JFPUA8Tj2XW)

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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  $r1\_jordan17 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 \forall X0.((v1\_topreal2 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 \\
 (k15\_euclid np\_2)))))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\
 (k15\_euclid np\_2))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\
 (k15\_euclid np\_2))) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\
 (k15\_euclid np\_2))) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 \\
 (k15\_euclid np\_2))) \Rightarrow (\neg(X1 \neq X2) \wedge ((r1\_jordan17 X0 X1 X2 X3 X4) \wedge \\
 (\forall X5.(m1\_subset\_1 X5 (u1\_struct\_0 (k15\_euclid np\_2)))) \Rightarrow \\
 (\neg(X5 \neq X1) \wedge (X5 \neq X2) \wedge (r1\_jordan17 X0 X1 X5 X2 X4))))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 \forall X0.((v1\_topreal2 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 \\
 (k15\_euclid np\_2)))))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\
 (k15\_euclid np\_2))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\
 (k15\_euclid np\_2))) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\
 (k15\_euclid np\_2))) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 \\
 (k15\_euclid np\_2))) \Rightarrow ((r1\_jordan17 X0 X1 X2 X3 X4) \Rightarrow (r1\_jordan17 \\
 X0 X3 X4 X1 X2))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
 \forall X0.((v1\_topreal2 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 \\
 (k15\_euclid np\_2)))))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\
 (k15\_euclid np\_2))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\
 (k15\_euclid np\_2))) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\
 (k15\_euclid np\_2))) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 \\
 (k15\_euclid np\_2))) \Rightarrow ((r1\_jordan17 X0 X1 X2 X3 X4) \Rightarrow (r1\_jordan17 \\
 X0 X2 X3 X4 X1))))))
 \end{aligned} \tag{3}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v1\_topreal2 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & \quad (k15\_euclid np\_2)))))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\ & \quad (k15\_euclid np\_2))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\ & \quad (k15\_euclid np\_2))) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\ & \quad (k15\_euclid np\_2))) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 \\ & \quad (k15\_euclid np\_2)))))) \Rightarrow (\neg(X1 \neq X2) \wedge ((r1\_jordan17 X0 X3 X1 X2 X4) \wedge \\ & \quad (\forall X5.(m1\_subset\_1 X5 (u1\_struct\_0 (k15\_euclid np\_2)))) \Rightarrow \\ & \quad (\neg(X5 \neq X1) \wedge ((X5 \neq X2) \wedge (r1\_jordan17 X0 X3 X1 X5 X2)))))))))) \end{aligned}$$