

# t15\_jordan19 (TM- LZv2SykwdToG7PvfJXiy8VvgNYinTKWjB)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v1\_topreal2 : \iota \Rightarrow o$  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  $np\_1 : \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_jordan8 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_matrix\_1 : \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k9\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_rltopsp1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_matrix\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_jordan6 : \iota \Rightarrow \iota$  be given. Let  $k3\_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_jordan9 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k8\_jordan6 : \iota \Rightarrow \iota$  be given. Let  $r2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_connsp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_compts\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_sppol\_1 : \iota \Rightarrow o$  be given. Let  $v2\_sppol\_1 : \iota \Rightarrow o$  be given. Let  $k2\_jordan1e : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_jordan1e : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
& \forall X0.((v2\_connsp\_1 X0 (k15\_euclid np\_2)) \wedge ((v2\_compts\_1 \\
& X0 (k15\_euclid np\_2)) \wedge ((\neg v1\_sppol\_1 X0) \wedge ((\neg v2\_sppol\_1 X0) \wedge \\
& (m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2))))))) \Rightarrow \\
& (\forall X1.(m1\_subset\_1 X1 k5\_numbers) \Rightarrow ((\neg r1\_xxreal\_0 X1 k6\_numbers) \Rightarrow \\
& (k3\_topreal1 np\_2 (k2\_jordan1e X0 X1) = k9\_jordan6 (k3\_topreal1 \\
& np\_2 (k1\_jordan9 X0 X1))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v2\_connsp\_1 X0 (k15\_euclid np\_2)) \wedge ((v2\_compts\_1 \\
& X0 (k15\_euclid np\_2)) \wedge ((\neg v1\_sppol\_1 X0) \wedge ((\neg v2\_sppol\_1 X0) \wedge \\
& (m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2))))))) \Rightarrow \\
& (\forall X1.(m1\_subset\_1 X1 k5\_numbers) \Rightarrow ((\neg r1\_xxreal\_0 X1 k6\_numbers) \Rightarrow \\
& (k3\_topreal1 np\_2 (k1\_jordan1e X0 X1) = k8\_jordan6 (k3\_topreal1 \\
& np\_2 (k1\_jordan9 X0 X1))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.((v1\_topreal2 \\
& X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2)))))) \Rightarrow \\
& (\forall X2.(m1\_subset\_1 X2 k5\_numbers) \Rightarrow (\forall X3.(m1\_subset\_1 \\
& X3 k5\_numbers) \Rightarrow (\forall X4.(m1\_subset\_1 X4 k5\_numbers) \Rightarrow (\neg(\neg \\
& r1\_xxreal\_0 X2 np\_1) \wedge ((\neg r1\_xxreal\_0 (k3\_finseq\_1 (k1\_jordan8 \\
& X1 X0)) X2) \wedge ((r1\_xxreal\_0 np\_1 X4) \wedge ((r1\_xxreal\_0 X4 X3) \wedge ((r1\_xxreal\_0 \\
& X3 (k1\_matrix\_1 (k1\_jordan8 X1 X0))) \wedge ((k9\_subset\_1 (u1\_struct\_0 \\
& (k15\_euclid np\_2)) (k1\_rltopsp1 (k15\_euclid np\_2)) (k3\_matrix\_1 \\
& (u1\_struct\_0 (k15\_euclid np\_2)) (k1\_jordan8 X1 X0) X2 X4) (k3\_matrix\_1 \\
& (u1\_struct\_0 (k15\_euclid np\_2)) (k1\_jordan8 X1 X0) X2 X3)) (k3\_topreal1 \\
& np\_2 (k1\_jordan1e X1 X0)) = k1\_tarski (k3\_matrix\_1 (u1\_struct\_0 \\
& (k15\_euclid np\_2)) (k1\_jordan8 X1 X0) X2 X4) \wedge ((k9\_subset\_1 ( \\
& u1\_struct\_0 (k15\_euclid np\_2)) (k1\_rltopsp1 (k15\_euclid np\_2)) \\
& (k3\_matrix\_1 (u1\_struct\_0 (k15\_euclid np\_2)) (k1\_jordan8 X1 \\
& X0) X2 X4) (k3\_matrix\_1 (u1\_struct\_0 (k15\_euclid np\_2)) (k1\_jordan8 \\
& X1 X0) X2 X3)) (k3\_topreal1 np\_2 (k2\_jordan1e X1 X0)) = k1\_tarski \\
& (k3\_matrix\_1 (u1\_struct\_0 (k15\_euclid np\_2)) (k1\_jordan8 X1 \\
& X0) X2 X3) \wedge (r2\_subset\_1 (k1\_rltopsp1 (k15\_euclid np\_2)) (k3\_matrix\_1 \\
& (u1\_struct\_0 (k15\_euclid np\_2)) (k1\_jordan8 X1 X0) X2 X4) (k3\_matrix\_1 \\
& (u1\_struct\_0 (k15\_euclid np\_2)) (k1\_jordan8 X1 X0) X2 X3)) (k9\_jordan6 \\
& X1)))))))))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2)))) \Rightarrow ((v1\_topreal2 X0) \Rightarrow (v2\_connsp\_1 X0 (k15\_euclid np\_2))) \tag{4}$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2)))) \Rightarrow ((v1\_topreal2 X0) \Rightarrow ((v1\_topreal2 X0) \wedge ((\neg v1\_sppol\_1 X0) \wedge (\neg v2\_sppol\_1 X0)))) \tag{5}$$

Assume the following.

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

**Theorem 1**

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.((v1\_topreal2 \\ & X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc.1 (u1\_struct\_0 (k15\_euclid np\_2)))))) \Rightarrow \\ & (\forall X2.(m1\_subset\_1 X2 k5\_numbers) \Rightarrow (\forall X3.(m1\_subset\_1 \\ & X3 k5\_numbers) \Rightarrow (\forall X4.(m1\_subset\_1 X4 k5\_numbers) \Rightarrow (\neg(\neg \\ & r1\_xxreal\_0 X2 np\_1) \wedge ((\neg r1\_xxreal\_0 (k3\_finseq\_1 (k1\_jordan8 \\ & X1 X0)) X2) \wedge ((r1\_xxreal\_0 np\_1 X3) \wedge ((r1\_xxreal\_0 X3 X4) \wedge ((r1\_xxreal\_0 \\ & X4 (k1\_matrix\_1 (k1\_jordan8 X1 X0))) \wedge ((\neg r1\_xxreal\_0 X0 k6\_numbers) \wedge \\ & ((k9\_subset\_1 (u1\_struct\_0 (k15\_euclid np\_2)) (k1\_rltopsp1 \\ & (k15\_euclid np\_2) (k3\_matrix\_1 (u1\_struct\_0 (k15\_euclid np\_2)) \\ & (k1\_jordan8 X1 X0) X2 X3) (k3\_matrix\_1 (u1\_struct\_0 (k15\_euclid \\ & np\_2)) (k1\_jordan8 X1 X0) X2 X4)) (k9\_jordan6 (k3\_topreal1 np\_2 \\ & (k1\_jordan9 X1 X0))) = k1\_tarski (k3\_matrix\_1 (u1\_struct\_0 (k15\_euclid \\ & np\_2)) (k1\_jordan8 X1 X0) X2 X4)) \wedge ((k9\_subset\_1 (u1\_struct\_0 \\ & (k15\_euclid np\_2)) (k1\_rltopsp1 (k15\_euclid np\_2) (k3\_matrix\_1 \\ & (u1\_struct\_0 (k15\_euclid np\_2)) (k1\_jordan8 X1 X0) X2 X3) (k3\_matrix\_1 \\ & (u1\_struct\_0 (k15\_euclid np\_2)) (k1\_jordan8 X1 X0) X2 X4)) (k8\_jordan6 \\ & (k3\_topreal1 np\_2 (k1\_jordan9 X1 X0))) = k1\_tarski (k3\_matrix\_1 \\ & (u1\_struct\_0 (k15\_euclid np\_2)) (k1\_jordan8 X1 X0) X2 X3)) \wedge (r2\_subset\_1 \\ & (k1\_rltopsp1 (k15\_euclid np\_2) (k3\_matrix\_1 (u1\_struct\_0 (k15\_euclid \\ & np\_2)) (k1\_jordan8 X1 X0) X2 X3) (k3\_matrix\_1 (u1\_struct\_0 (k15\_euclid \\ & np\_2)) (k1\_jordan8 X1 X0) X2 X4)) (k9\_jordan6 X1))))))))))\end{aligned}$$