

## t55\_jordan4

(TMacPGj8RMmR8AmmeqrDa4qeqGBjjMu1Ags)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v3\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_finseq\_6 : \iota \Rightarrow \iota \Rightarrow o$  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  $v1\_topreal1 : \iota \Rightarrow o$  be given. Let  $v2\_topreal1 : \iota \Rightarrow o$  be given. Let  $v1\_goboard5 : \iota \Rightarrow o$  be given. Let  $v2\_goboard5 : \iota \Rightarrow o$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r3\_jordan4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_jordan4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r2\_jordan4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\
 & \quad X1 k5\_numbers) \Rightarrow (\forall X2.((\neg v1\_xboole\_0 X2) \wedge ((\neg v3\_funct\_1 \\
 & \quad X2) \wedge ((v1\_finseq\_6 X2 (u1\_struct\_0 (k15\_euclid np\_2))) \wedge ((v1\_topreal1 \\
 & \quad X2) \wedge ((v2\_topreal1 X2) \wedge ((v1\_goboard5 X2) \wedge ((v2\_goboard5 X2) \wedge \\
 & \quad (m2\_finseq\_1 X2 (u1\_struct\_0 (k15\_euclid np\_2)))))))))) \Rightarrow (\forall X3. \\
 & \quad (m2\_finseq\_1 X3 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow (\forall X4. \\
 & \quad (m2\_finseq\_1 X4 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow (\neg (X0 \neq X1) \wedge \\
 & \quad ((r1\_jordan4 X2 X3 X0 X1) \wedge ((r2\_jordan4 X2 X4 X0 X1) \wedge (k1\_funct\_1 \\
 & \quad \quad X3 np\_2 = k1\_funct\_1 X4 np\_2)))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\
 & \quad X1 k5\_numbers) \Rightarrow (\forall X2.((\neg v1\_xboole\_0 X2) \wedge ((\neg v3\_funct\_1 \\
 & \quad X2) \wedge ((v1\_finseq\_6 X2 (u1\_struct\_0 (k15\_euclid np\_2))) \wedge ((v1\_topreal1 \\
 & \quad X2) \wedge ((v2\_topreal1 X2) \wedge ((v1\_goboard5 X2) \wedge ((v2\_goboard5 X2) \wedge \\
 & \quad (m2\_finseq\_1 X2 (u1\_struct\_0 (k15\_euclid np\_2)))))))))) \Rightarrow (\forall X3. \\
 & \quad (m2\_finseq\_1 X3 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow (\forall X4. \\
 & \quad (m2\_finseq\_1 X4 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow (((r2\_jordan4 \\
 & \quad X2 X3 X0 X1) \wedge (r2\_jordan4 X2 X4 X0 X1)) \Rightarrow (X3 = X4))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\
& X1 k5\_numbers) \Rightarrow (\forall X2.((\neg v1\_xboole\_0 X2) \wedge ((\neg v3\_funct\_1 \\
& X2) \wedge ((v1\_finseq\_6 X2 (u1\_struct\_0 (k15\_euclid np\_2))) \wedge ((v1\_topreal1 \\
& X2) \wedge ((v2\_topreal1 X2) \wedge ((v1\_goboard5 X2) \wedge ((v2\_goboard5 X2) \wedge \\
& (m2\_finseq\_1 X2 (u1\_struct\_0 (k15\_euclid np\_2)))))))))) \Rightarrow (\forall X3. \\
& (m2\_finseq\_1 X3 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow (\forall X4. \\
& (m2\_finseq\_1 X4 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow (((r1\_jordan4 \\
& X2 X3 X0 X1) \wedge (r1\_jordan4 X2 X4 X0 X1)) \Rightarrow (X3 = X4))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v1\_xboole\_0 X0) \wedge ((\neg v3\_funct\_1 X0) \wedge ((v1\_finseq\_6 \\
& X0 (u1\_struct\_0 (k15\_euclid np\_2))) \wedge ((v1\_topreal1 X0) \wedge ((v2\_topreal1 \\
& X0) \wedge ((v1\_goboard5 X0) \wedge ((v2\_goboard5 X0) \wedge (m2\_finseq\_1 X0 (u1\_struct\_0 \\
& (k15\_euclid np\_2)))))))))) \Rightarrow (\forall X1.(m2\_finseq\_1 X1 (u1\_struct\_0 \\
& (k15\_euclid np\_2))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 k5\_numbers) \Rightarrow \\
& (\forall X3.(m1\_subset\_1 X3 k5\_numbers) \Rightarrow ((r3\_jordan4 X0 X1 X2 \\
& X3) \Leftrightarrow ((r1\_jordan4 X0 X1 X2 X3) \vee (r2\_jordan4 X0 X1 X2 X3))))))
\end{aligned} \tag{4}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\
& X1 k5\_numbers) \Rightarrow (\forall X2.((\neg v1\_xboole\_0 X2) \wedge ((\neg v3\_funct\_1 \\
& X2) \wedge ((v1\_finseq\_6 X2 (u1\_struct\_0 (k15\_euclid np\_2))) \wedge ((v1\_topreal1 \\
& X2) \wedge ((v2\_topreal1 X2) \wedge ((v1\_goboard5 X2) \wedge ((v2\_goboard5 X2) \wedge \\
& (m2\_finseq\_1 X2 (u1\_struct\_0 (k15\_euclid np\_2)))))))))) \Rightarrow (\forall X3. \\
& (m2\_finseq\_1 X3 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow (\forall X4. \\
& (m2\_finseq\_1 X4 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow (((r3\_jordan4 \\
& X2 X3 X0 X1) \wedge ((r3\_jordan4 X2 X4 X0 X1) \wedge (k1\_funct\_1 X3 np\_2 = k1\_funct\_1 \\
& X4 np\_2))) \Rightarrow ((X0 = X1) \vee (X3 = X4))))))
\end{aligned}$$