

t41\_jordan1h  
(TMEi2XhArxaYVE4ErmJco84SmrdCdv2Lv6o)

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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  $k2\_goboard9 : \iota \Rightarrow \iota$  be given. Let  $k2\_jordan2c : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_sprect\_2 : \iota \Rightarrow o$  be given. Let  $k3\_goboard9 : \iota \Rightarrow \iota$  be given. Let  $k1\_goboard9 : \iota \Rightarrow \iota$  be given. Let  $k4\_finseq\_5 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_finseq\_5 : \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_finseq\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1\_xboole\_0 X0) \wedge (\neg v3\_funct\_1 X0) \wedge ((v1\_finseq\_6 \\ & X0 (u1\_struct\_0 (k15\_euclid np\_2))) \wedge ((v1\_topreal1 X0) \wedge ((v2\_topreal1 \\ & X0) \wedge ((v1\_goboard5 X0) \wedge ((v2\_goboard5 X0) \wedge (m2\_finseq\_1 X0 (u1\_struct\_0 \\ & (k15\_euclid np\_2)))))))))) \Rightarrow (k2\_goboard9 X0 \neq k3\_goboard9 X0) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v3\_funct\_1 X0) \wedge ((\neg v1\_xboole\_0 X0) \wedge ((v1\_finseq\_6 \\ & X0 (u1\_struct\_0 (k15\_euclid np\_2))) \wedge ((v1\_topreal1 X0) \wedge ((v2\_topreal1 \\ & X0) \wedge ((v1\_goboard5 X0) \wedge ((v2\_goboard5 X0) \wedge (m2\_finseq\_1 X0 (u1\_struct\_0 \\ & (k15\_euclid np\_2)))))))))) \Rightarrow ((v1\_sprect\_2 X0) \vee (v1\_sprect\_2 \\ & (k1\_goboard9 X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v3\_funct\_1 X0) \wedge ((\neg v1\_xboole\_0 X0) \wedge ((v1\_finseq\_6 \\ & X0 (u1\_struct\_0 (k15\_euclid np\_2))) \wedge ((v1\_topreal1 X0) \wedge ((v2\_topreal1 \\ & X0) \wedge ((v1\_goboard5 X0) \wedge ((v2\_goboard5 X0) \wedge ((v1\_sprect\_2 X0) \wedge \\ & (m2\_finseq\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2)))))))))) \Rightarrow ( \\ & k2\_jordan2c np\_2 (k3\_topreal1 np\_2 X0) = k2\_goboard9 X0) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1\_xboole\_0 X0) \wedge ((\neg v3\_funct\_1 X0) \wedge ((v1\_finseq\_6 \\ & X0 (u1\_struct\_0 (k15\_euclid np\_2))) \wedge ((v1\_topreal1 X0) \wedge ((v2\_topreal1 \\ & X0) \wedge ((v1\_goboard5 X0) \wedge ((v2\_goboard5 X0) \wedge (m2\_finseq\_1 X0 (u1\_struct\_0 \\ & (k15\_euclid np\_2)))))))))) \Rightarrow (k3\_goboard9 X0 = k2\_goboard9 (k1\_goboard9 \\ & X0)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2\_finseq\_1 X0 (u1\_struct\_0 (k15\_euclid np\_2))) \Rightarrow \\ & (k3\_topreal1 np\_2 X0 = k3\_topreal1 np\_2 (k4\_finseq\_5 (u1\_struct\_0 \\ & (k15\_euclid np\_2)) X0)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1 X1 X0) \Rightarrow (k4\_finseq\_5 X0 X1 = k3\_finseq\_5 X1) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1\_xboole\_0 X0) \wedge ((v1\_finseq\_6 X0 (u1\_struct\_0 \\ & (k15\_euclid np\_2))) \wedge ((v1\_topreal1 X0) \wedge ((v2\_topreal1 X0) \wedge \\ & (v1\_goboard5 X0) \wedge ((v2\_goboard5 X0) \wedge (m1\_finseq\_1 X0 (u1\_struct\_0 \\ & (k15\_euclid np\_2)))))))))) \Rightarrow (k1\_goboard9 X0 = k3\_finseq\_5 X0) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge ((\neg v3\_funct\_1 \\ & X0) \wedge (v1\_finseq\_1 X0)))) \Rightarrow ((v1\_relat\_1 (k3\_finseq\_5 X0)) \wedge ((v1\_funct\_1 \\ & (k3\_finseq\_5 X0)) \wedge ((\neg v3\_funct\_1 (k3\_finseq\_5 X0)) \wedge (v1\_finseq\_1 \\ & (k3\_finseq\_5 X0)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1 X1 X0) \Rightarrow ((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 X1))) \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1\_xboole\_0 X0) \wedge ((v1\_finseq\_6 X0 (u1\_struct\_0 \\ & (k15\_euclid np\_2))) \wedge ((v1\_topreal1 X0) \wedge ((v2\_topreal1 X0) \wedge \\ & (v1\_goboard5 X0) \wedge ((v2\_goboard5 X0) \wedge (m1\_finseq\_1 X0 (u1\_struct\_0 \\ & (k15\_euclid np\_2)))))))))) \Rightarrow ((\neg v1\_xboole\_0 (k1\_goboard9 X0)) \wedge \\ & ((v1\_finseq\_6 (k1\_goboard9 X0) (u1\_struct\_0 (k15\_euclid np\_2))) \wedge \\ & ((v1\_topreal1 (k1\_goboard9 X0)) \wedge ((v2\_topreal1 (k1\_goboard9 \\ & X0)) \wedge ((v1\_goboard5 (k1\_goboard9 X0)) \wedge ((v2\_goboard5 (k1\_goboard9 \\ & X0)) \wedge (m2\_finseq\_1 (k1\_goboard9 X0) (u1\_struct\_0 (k15\_euclid \\ & np\_2)))))))))) \end{aligned} \quad (11)$$

**Theorem 1**

$$\begin{aligned} \forall X0. (&(\neg v1\_xboole\_0 X0) \wedge (\neg v3\_funct\_1 X0) \wedge (v1\_finseq\_6 \\ &X0 (u1\_struct\_0 (k15\_euclid np\_2))) \wedge (v1\_topreal1 X0) \wedge (v2\_topreal1 \\ &X0) \wedge (v1\_goboard5 X0) \wedge (v2\_goboard5 X0) \wedge (m2\_finseq\_1 X0 (u1\_struct\_0 \\ &(k15\_euclid np\_2)))))) \Rightarrow ((k2\_goboard9 X0 = k2\_jordan2c np\_2 \\ &(k3\_topreal1 np\_2 X0)) \Rightarrow (v1\_sprect\_2 X0)) \end{aligned}$$