

l173\_jordan  
(TMdovPoFUrq4PcXPpniZ9LbzskSMa221pPa)

October 27, 2020

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  $r1\_jordan24 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k19\_euclid : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_real\_1 : \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_rltopsp1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_3 : \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid \\ np\_2)))) \Rightarrow ((r1\_jordan24 np\_2 X0 (k19\_euclid (k1\_real\_1 np\_1) \\ k6\_numbers) (k19\_euclid np\_1 k6\_numbers)) \Rightarrow (r1\_xboole\_0 X0 ( \\ k1\_rltopsp1 (k15\_euclid np\_2) (k19\_euclid (k1\_real\_1 np\_1) \\ (k1\_real\_1 np\_3)) (k19\_euclid np\_1 (k1\_real\_1 np\_3)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(\neg(\neg r1\_xboole\_0 X0 X1) \wedge (\forall X2.\neg(X2 \in \\ X0) \wedge (X2 \in X1))) \wedge (\neg(\exists X2.(X2 \in X0) \wedge (X2 \in X1)) \wedge (r1\_xboole\_0 \\ X0 X1)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} r1\_tarski (k1\_rltopsp1 (k15\_euclid np\_2) (k19\_euclid np\_1 ( \\ k1\_real\_1 np\_3)) (k19\_euclid k6\_numbers (k1\_real\_1 np\_3))) \\ (k1\_rltopsp1 (k15\_euclid np\_2) (k19\_euclid (k1\_real\_1 np\_1) \\ (k1\_real\_1 np\_3)) (k19\_euclid np\_1 (k1\_real\_1 np\_3))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski X0 X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \quad (4)$$

**Theorem 1**

$$\begin{aligned} \forall X0.((v1\_topreal2 X0) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 \\ (k15\_euclid np\_2)))))) \Rightarrow ((r1\_jordan24 np\_2 X0 (k19\_euclid (k1\_real\_1 \\ np\_1) k6\_numbers) (k19\_euclid np\_1 k6\_numbers)) \Rightarrow (r1\_xboole\_0 \\ (k1\_rltopsp1 (k15\_euclid np\_2) (k19\_euclid np\_1 (k1\_real\_1 \\ np\_3)) (k19\_euclid k6\_numbers (k1\_real\_1 np\_3))) X0)) \end{aligned}$$