

t41\_fintopo6  
(TMTd77Kb2kERNAzFgHtsiVqMbNKjz4ed7xG)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  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  $v3\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v1\_fin\_topo : \iota \Rightarrow o$  be given. Let  $r1\_fintopo6 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_fintopo4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge (l1\_orders\_2 \\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ X0))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 \\ X0))) \Rightarrow ((r1\_fintopo4 X0 X1 X2) \Rightarrow (r1\_xboole\_0 X1 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\ (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X2. \\ (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\neg (v1\_fin\_topo \\ X0) \wedge ((r1\_fintopo6 X0 X1) \wedge ((r1\_fintopo6 X0 X2) \wedge ((X1 \neq X2) \wedge (\neg r1\_fintopo4 \\ X0 X1 X2)))))))) \end{aligned} \quad (2)$$

**Theorem 1**

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\ (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X2. \\ (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\neg (v3\_orders\_2 \\ X0) \wedge ((v1\_fin\_topo X0) \wedge ((r1\_fintopo6 X0 X1) \wedge ((r1\_fintopo6 X0 \\ X2) \wedge ((X1 \neq X2) \wedge (\neg r1\_xboole\_0 X1 X2)))))))) \end{aligned}$$