

t28\_fintopo2  
(TMaxw5pn49najcvi8tDAJr6f34Mwe2nBH3m)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_fintopo2 : \iota \Rightarrow o$  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  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_fintopo2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1\_tarski X0 X1) \wedge (r1\_tarski X2 X1)) \Rightarrow (r1\_tarski (k2\_xboole\_0 X0 X2) X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. r1\_tarski X0 (k2\_xboole\_0 X0 X1) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_fintopo2 X0)) \Rightarrow (\forall X1. \\ (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X2. \\ (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow ((r1\_tarski \\ X1 X2) \Rightarrow (r1\_tarski (k10\_fintopo2 X0 X1) (k10\_fintopo2 X0 X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 X0))) \Rightarrow (k4\_subset\_1 X0 X1 X2 = k2\_xboole\_0 X1 X2) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 X0))) \Rightarrow (m1\_subset\_1 (k4\_subset\_1 X0 X1 X2) (k1\_zfmisc\_1 X0)) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge (l1\_fintopo2 X0)) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \Rightarrow (m1\_subset\_1 (k10\_fintopo2 X0 X1) (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.k2\_xboole\_0 X0 X1 = k2\_xboole\_0 X1 X0 \quad (7)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_fintopo2 X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (r1\_tarski ( \\ & k4\_subset\_1 (u1\_struct\_0 X0) (k10\_fintopo2 X0 X1) (k10\_fintopo2 \\ & X0 X2)) (k10\_fintopo2 X0 (k4\_subset\_1 (u1\_struct\_0 X0) X1 X2)))))) \end{aligned}$$