

## t5\_fintopo3

(TMUBx5Q71kq71FmazGu7w6m2R5SGVMEV8w1)

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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  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k12\_fin\_topo : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_fin\_topo : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (r1\_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (k12\_fin\_topo \\ & X0 X1 = ReplSep (toset (\lambda X2 : \iota. m1\_subset\_1 X2 (u1\_struct\_0 \\ & X0)))) (\lambda X2 : \iota. \exists X3. (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \wedge \\ & ((X3 \in X1) \wedge (X2 \in k1\_fin\_topo X0 X3))) (\lambda X2 : \iota. X2))) \quad (2) \end{aligned}$$

### Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow ((r1\_tarski \\ & X1 X2) \Rightarrow (r1\_tarski (k12\_fin\_topo X0 X1) (k12\_fin\_topo X0 X2)))))) \end{aligned}$$