

# t2\_fintopo3 (TMHJAtcFwCke- jwXwUY7WduqFNfSfczxyUQP)

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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  $k1\_fintopo3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_fin\_topo : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\
 & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (k1\_fintopo3 \\
 & X0 X1 = ReplSep (toset (\lambda X2 : \iota. m1\_subset\_1 X2 (u1\_struct\_0 \\
 & X0)))) (\lambda X2 : \iota. \forall X3. (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow \\
 & (\neg (X3 \in k3\_subset\_1 (u1\_struct\_0 X0) X1) \wedge (X2 \in k1\_fin\_topo X0 X3))) \\
 & (\lambda X2 : \iota. X2)))
 \end{aligned} \tag{1}$$

## Theorem 1

$$\begin{aligned}
 & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\
 & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X2. \\
 & (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow ((X2 \in k1\_fintopo3 X0 X1) \Leftrightarrow (\forall X3. \\
 & (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (\neg (X3 \in k3\_subset\_1 (u1\_struct\_0 \\
 & X0) X1) \wedge (X2 \in k1\_fin\_topo X0 X3))))))
 \end{aligned}$$