

# t47\_tops\_3 (TMRdwuG- GhdXQQ8FZpMLMxVWUEdVhjSh1YJR)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_pre\_topc : \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  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  $v1\_tops\_3 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_tops\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_tops\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k7\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ & X0))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0))) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0))) \Rightarrow (((v1\_tops\_3 X1 X0) \wedge (v1\_tops\_1 X2 X0)) \Rightarrow (v1\_tops\_1 (k9\_subset\_1 \\ & (u1\_struct\_0 X0) X1 X2) X0)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 X0)) \Rightarrow (k7\_subset\_1 X0 X1 X2 = k9\_subset\_1 \\ & X0 X1 (k3\_subset\_1 X0 X2))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (m1\_subset\_1 \\ & (k3\_subset\_1 X0 X1) (k1\_zfmisc\_1 X0)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1\_pre\_topc X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X0))) \Rightarrow ((v2\_tops\_1 X1 X0) \Leftrightarrow (v1\_tops\_1 (k3\_subset\_1 \\ & (u1\_struct\_0 X0) X1) X0))) \end{aligned} \tag{4}$$

## Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ & X0))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0))) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0))) \Rightarrow (((v1\_tops\_3 X1 X0) \wedge (v2\_tops\_1 X2 X0)) \Rightarrow (v1\_tops\_1 (k7\_subset\_1 \\ & (u1\_struct\_0 X0) X1 X2) X0)))) \end{aligned}$$