t31_tops_2 (TMTqQFXqfUnNgw8Y7TaN4G8rm9yoQoqjGu8)

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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 $k9\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_tops\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2))) \Rightarrow (m1\_subset\_1\ X0\ X2) \tag{1}$$

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \Rightarrow (m1\_subset\_1\ (k9\_subset\_1\ (u1\_struct\_0\ X0)\ X1\ X2)\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k1\_pre\_topc\ X0\ X2)))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((l1\_pre\_topc\ X0) \wedge ((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))))) \Rightarrow (m1\_subset\_1\ (k1\_tops\_2\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k1\_pre\_topc\ X0\ X1))))) \tag{3}$$

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k1\_pre\_topc\ X0\ X1)))))) \Rightarrow ((X3 = k1\_tops\_2\ X0\ X1\ X2) \Leftrightarrow (\forall X4.(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k1\_pre\_topc\ X0\ X1)))) \Rightarrow ((X4 \in X3) \Leftrightarrow (\exists X5.(m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \wedge ((X5 \in X2) \wedge (k9\_subset\_1\ (u1\_struct\_0\ X0)\ X5\ X1 = X4)))))))) \tag{4}$$

Theorem 1

$$\forall X0.(l1\_pre\_topc\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))))\Rightarrow((X1 \in X3)\Rightarrow(k9\_subset\_1\ (u1\_struct\_0\ X0)\ X1\ X2 \in k1\_tops\_2\ X0\ X2\ X3)))))$$