t28_connsp_3 (TMTdkv2bUo35rjXMrRxCA8EeDDJrfjp9cyF)

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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 $v3\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_connsp\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_pre\_topc : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ X1)) \Leftrightarrow (r1\_tarski\ X0\ X1) \tag{1}$$

Assume the following.

$$\begin{gathered}\forall X0.(l1\_pre\_topc\ X0) \Rightarrow (\forall X1.(m1\_pre\_topc\ X1\ X0) \Rightarrow \\ (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X1))) \Rightarrow \\ ((v3\_pre\_topc\ X2\ X1) \Leftrightarrow (\exists X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1 \\ (u1\_struct\_0\ X0))) \wedge ((v3\_pre\_topc\ X3\ X0) \wedge (k9\_subset\_1\ (u1\_struct\_0 \\ X1)\ X3\ (k2\_struct\_0\ X1) = X2))))))\end{gathered} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.r1\_tarski\ X0\ X0 \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ X0)) \Rightarrow (k9\_subset\_1\ X0\ X1\ X2 = k3\_xboole\_0\ X1\ X2) \tag{4}$$

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \Rightarrow (u1\_struct\_0\ (k1\_pre\_topc\ X0\ X1) = X1)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((l1\_pre\_topc\ X0)\wedge((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))))\Rightarrow(m1\_subset\_1\ (k4\_connsp\_3\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k1\_pre\_topc\ X0\ X2)))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((l1\_pre\_topc\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))))\Rightarrow((v1\_pre\_topc\ (k1\_pre\_topc\ X0\ X1))\wedge(m1\_pre\_topc\ (k1\_pre\_topc\ X0\ X1)\ X0)) \tag{7}$$

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow(\forall X2.((v1\_pre\_topc\ X2)\wedge(m1\_pre\_topc\ X2\ X0))\Rightarrow((X2 = k1\_pre\_topc\ X0\ X1)\Leftrightarrow(k2\_struct\_0\ X2 = X1)))) \tag{8}$$

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow(k4\_connsp\_3\ X0\ X1\ X2 = k9\_subset\_1\ (u1\_struct\_0\ X0)\ X1\ X2))) \tag{9}$$

Theorem 1

$$\forall X0.((v2\_pre\_topc\ X0)\wedge(l1\_pre\_topc\ X0))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow((v3\_pre\_topc\ X1\ X0)\Rightarrow(v3\_pre\_topc\ (k4\_connsp\_3\ X0\ X1\ X2)\ (k1\_pre\_topc\ X0\ X2)))))$$