t15_tmap_1 (TMaYvocePtdbjX4rbcztjbqFH7giXuFyYzj)

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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 $m1\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_tsep\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_connsp\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $v3\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_pre\_topc\ X0) \wedge (l1\_pre\_topc\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \Rightarrow ((m1\_connsp\_2\ X2\ X0\ X1) \Leftrightarrow (\exists X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \wedge ((v3\_pre\_topc\ X3\ X0) \wedge ((r1\_tarski\ X3\ X2) \wedge (X1 \in X3)))))))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((r1\_tarski\ X0\ X1) \wedge (r1\_tarski\ X1\ X2)) \Rightarrow (r1\_tarski\ X0\ X2) \tag{2}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_pre\_topc\ X0) \wedge (l1\_pre\_topc\ X0))) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge (m1\_pre\_topc\ X1\ X0)) \Rightarrow (\forall X2.((\neg v2\_struct\_0\ X2) \wedge (m1\_pre\_topc\ X2\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ (k1\_tsep\_1\ X0\ X1\ X2))) \Rightarrow (\forall X4.(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X1))) \Rightarrow (\forall X5.(m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X2))) \Rightarrow (\neg (v3\_pre\_topc\ X4\ X1) \wedge ((X3 \in X4) \wedge ((v3\_pre\_topc\ X5\ X2) \wedge ((X3 \in X5) \wedge (\forall X6.(m1\_subset\_1\ X6\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k1\_tsep\_1\ X0\ X1\ X2)))) \Rightarrow (\neg (v3\_pre\_topc\ X6\ (k1\_tsep\_1\ X0\ X1\ X2)) \wedge ((X3 \in X6) \wedge (r1\_tarski\ X6\ (k2\_xboole\_0\ X4\ X5)))))))))))))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((r1\_tarski\ X0\ X1) \wedge (r1\_tarski\ X2\ X3)) \Rightarrow (r1\_tarski\ (k2\_xboole\_0\ X0\ X2)\ (k2\_xboole\_0\ X1\ X3)) \tag{4}$$

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0)\Rightarrow(\forall X1.(m1\_pre\_topc\ X1\ X0)\Rightarrow (l1\_pre\_topc\ X1)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge((v2\_pre\_topc\ X0)\wedge (l1\_pre\_topc\ X0)))\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)))\Rightarrow(\forall X2. (m1\_connsp\_2\ X2\ X0\ X1)\Rightarrow(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))) \tag{6}$$

Assume the following.

$$\forall X0.((v2\_pre\_topc\ X0)\wedge(l1\_pre\_topc\ X0))\Rightarrow(\forall X1. (m1\_pre\_topc\ X1\ X0)\Rightarrow(v2\_pre\_topc\ X1)) \tag{7}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_pre\_topc\ X0)\wedge(l1\_pre\_topc\ X0)))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge(m1\_pre\_topc\ X1\ X0))\Rightarrow(\forall X2.((\neg v2\_struct\_0\ X2)\wedge(m1\_pre\_topc\ X2\ X0))\Rightarrow(\forall X3. (m1\_subset\_1\ X3\ (u1\_struct\_0\ (k1\_tsep\_1\ X0\ X1\ X2)))\Rightarrow(\forall X4. (m1\_subset\_1\ X4\ (u1\_struct\_0\ X1))\Rightarrow(\forall X5.(m1\_subset\_1\ X5 (u1\_struct\_0\ X2))\Rightarrow(((X4 = X3)\wedge(X5 = X3))\Rightarrow(\forall X6.(m1\_connsp\_2 X6\ X1\ X4)\Rightarrow(\forall X7.(m1\_connsp\_2\ X7\ X2\ X5)\Rightarrow(\exists X8.(m1\_subset\_1 X8\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k1\_tsep\_1\ X0\ X1\ X2))))\wedge((v3\_pre\_topc X8\ (k1\_tsep\_1\ X0\ X1\ X2))\wedge((X3 \in X8)\wedge(r1\_tarski\ X8\ (k2\_xboole\_0\ X6 X7))))))))))))$$