t52_tmap_1 (TMSD2TZu7tm7z8YB8XudHF4nZ8GPUFewVHh)

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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 $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_pre\_topc : \iota \Rightarrow \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tmap\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_pre\_topc\ X0) \wedge (l1\_pre\_topc\ X0))) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v2\_pre\_topc\ X1) \wedge (l1\_pre\_topc\ X1))) \Rightarrow (\forall X2.((\neg v2\_struct\_0\ X2) \wedge ((v2\_pre\_topc\ X2) \wedge (l1\_pre\_topc\ X2))) \Rightarrow (((u1\_struct\_0\ X0 = u1\_struct\_0\ X1) \wedge (r1\_tarski\ (u1\_pre\_topc\ X1)\ (u1\_pre\_topc\ X0))) \Rightarrow (\forall X3.((v1\_funct\_1\ X3) \wedge ((v1\_funct\_2\ X3\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X2)) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X2)))))) \Rightarrow (\forall X4.((v1\_funct\_1\ X4) \wedge ((v1\_funct\_2\ X4\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X2)) \wedge (m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X2)))))) \Rightarrow ((r1\_funct\_2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X2)\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X2)\ X3\ X4) \Rightarrow (\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X6.(m1\_subset\_1\ X6\ (u1\_struct\_0\ X1)) \Rightarrow (((X5 = X6) \wedge (r1\_tmap\_1\ X1\ X2\ X4\ X6)) \Rightarrow (r1\_tmap\_1\ X0\ X2\ X3\ X5)))))))))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_pre\_topc\ X0) \wedge (l1\_pre\_topc\ X0))) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v2\_pre\_topc\ X1) \wedge (l1\_pre\_topc\ X1))) \Rightarrow (\forall X2.((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0)) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0)))))) \Rightarrow ((v5\_pre\_topc\ X2\ X1\ X0) \Leftrightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X1)) \Rightarrow (r1\_tmap\_1\ X1\ X0\ X2\ X3))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.\ ((\neg v1\_xboole\_0\ X1)\wedge((\neg v1\_xboole\_0\ X3)\wedge(((v1\_funct\_1\ X4)\wedge((v1\_funct\_2\ X4\ X0\ X1)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\wedge((v1\_funct\_1\ X5)\wedge((v1\_funct\_2\ X5\ X2\ X3)\wedge(m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X2\ X3))))))))\Rightarrow(r1\_funct\_2\ X0\ X1\ X2\ X3\ X4\ X4) \tag{3}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_struct\_0\ X0))\Rightarrow(\neg v1\_xboole\_0\ (u1\_struct\_0\ X0)) \tag{4}$$

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0)\Rightarrow(l1\_struct\_0\ X0) \tag{5}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_pre\_topc\ X0)\wedge(l1\_pre\_topc\ X0)))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v2\_pre\_topc\ X1)\wedge(l1\_pre\_topc\ X1)))\Rightarrow(\forall X2.((\neg v2\_struct\_0\ X2)\wedge((v2\_pre\_topc\ X2)\wedge(l1\_pre\_topc\ X2)))\Rightarrow(((u1\_struct\_0\ X0 = u1\_struct\_0\ X1)\wedge(r1\_tarski\ (u1\_pre\_topc\ X1)\ (u1\_pre\_topc\ X0)))\Rightarrow(\forall X3.((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X2))\wedge((v5\_pre\_topc\ X3\ X1\ X2)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X2)))))))\Rightarrow((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X2))\wedge((v5\_pre\_topc\ X3\ X0\ X2)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X2))))))))))$$