t83_tmap_1 (TMSL5kLP6LRVoY6kCZ7CwUFo7wdcj84jZ5P)

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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 $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ 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 $k3\_tmap\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_pre\_topc\ X0) \wedge (l1\_pre\_topc\ X0))) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v2\_pre\_topc\ X1) \wedge (l1\_pre\_topc\ X1))) \Rightarrow (\forall X2.((\neg v2\_struct\_0\ X2) \wedge (m1\_pre\_topc\ X2\ X0)) \Rightarrow (\forall X3.((\neg v2\_struct\_0\ X3) \wedge (m1\_pre\_topc\ X3\ X0)) \Rightarrow (\forall X4.((v1\_funct\_1\ X4) \wedge ((v1\_funct\_2\ X4\ (u1\_struct\_0\ X2)\ (u1\_struct\_0\ X1)) \wedge ((v5\_pre\_topc\ X4\ X2\ X1) \wedge (m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X2)\ (u1\_struct\_0\ X1))))))) \Rightarrow ((m1\_pre\_topc\ X3\ X2) \Rightarrow ((v1\_funct\_1\ (k3\_tmap\_1\ X0\ X1\ X2\ X3\ X4)) \wedge ((v1\_funct\_2\ (k3\_tmap\_1\ X0\ X1\ X2\ X3\ X4)\ (u1\_struct\_0\ X3)\ (u1\_struct\_0\ X1)) \wedge ((v5\_pre\_topc\ (k3\_tmap\_1\ X0\ X1\ X2\ X3\ X4)\ X3\ X1) \wedge (m1\_subset\_1\ (k3\_tmap\_1\ X0\ X1\ X2\ X3\ X4)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X3)\ (u1\_struct\_0\ X1))))))))))))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_pre\_topc\ X0) \wedge (l1\_pre\_topc\ X0))) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v2\_pre\_topc\ X1) \wedge (l1\_pre\_topc\ X1))) \Rightarrow (\forall X2.((\neg v2\_struct\_0\ X2) \wedge (m1\_pre\_topc\ X2\ X0)) \Rightarrow (\forall X3.((\neg v2\_struct\_0\ X3) \wedge (m1\_pre\_topc\ X3\ X0)) \Rightarrow (\forall X4.((\neg v2\_struct\_0\ X4) \wedge (m1\_pre\_topc\ X4\ X0)) \Rightarrow (((m1\_pre\_topc\ X3\ X2) \wedge (m1\_pre\_topc\ X4\ X3)) \Rightarrow (\forall X5.((v1\_funct\_1\ X5) \wedge ((v1\_funct\_2\ X5\ (u1\_struct\_0\ X2)\ (u1\_struct\_0\ X1)) \wedge (m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X2)\ (u1\_struct\_0\ X1)))))) \Rightarrow (r2\_funct\_2\ (u1\_struct\_0\ X4)\ (u1\_struct\_0\ X1)\ (k3\_tmap\_1\ X0\ X1\ X3\ X4\ (k3\_tmap\_1\ X0\ X1\ X2\ X3\ X5))\ (k3\_tmap\_1\ X0\ X1\ X2\ X4\ X5)))))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((v1\_funct\_1\ X2)\wedge ((v1\_funct\_2\ X2\ X0\ X1)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\wedge((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ X0\ X1)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))))\Rightarrow((r2\_funct\_2\ X0\ X1\ X2\ X3)\Leftrightarrow(X2 = X3)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(((\neg v2\_struct\_0\ X0)\wedge((v2\_pre\_topc\ X0)\wedge(l1\_pre\_topc\ X0)))\wedge(((\neg v2\_struct\_0\ X1)\wedge((v2\_pre\_topc\ X1)\wedge(l1\_pre\_topc\ X1)))\wedge((m1\_pre\_topc\ X2\ X0)\wedge((m1\_pre\_topc\ X3\ X0)\wedge((v1\_funct\_1\ X4)\wedge((v1\_funct\_2\ X4\ (u1\_struct\_0\ X2)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X2)\ (u1\_struct\_0\ X1))))))))))\Rightarrow((v1\_funct\_1\ (k3\_tmap\_1\ X0\ X1\ X2\ X3\ X4))\wedge((v1\_funct\_2\ (k3\_tmap\_1\ X0\ X1\ X2\ X3\ X4)\ (u1\_struct\_0\ X3)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ (k3\_tmap\_1\ X0\ X1\ X2\ X3\ X4)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X3)\ (u1\_struct\_0\ X1))))))) \tag{4}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_pre\_topc\ X0)\wedge(l1\_pre\_topc\ X0)))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v2\_pre\_topc\ X1)\wedge(l1\_pre\_topc\ X1)))\Rightarrow(\forall X2.((\neg v2\_struct\_0\ X2)\wedge(m1\_pre\_topc\ X2\ X0))\Rightarrow(\forall X3.((\neg v2\_struct\_0\ X3)\wedge(m1\_pre\_topc\ X3\ X0))\Rightarrow(\forall X4.((\neg v2\_struct\_0\ X4)\wedge(m1\_pre\_topc\ X4\ X0))\Rightarrow(((m1\_pre\_topc\ X2\ X3)\wedge(m1\_pre\_topc\ X4\ X2))\Rightarrow(\forall X5.((v1\_funct\_1\ X5)\wedge((v1\_funct\_2\ X5\ (u1\_struct\_0\ X3)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X3)\ (u1\_struct\_0\ X1))))))\Rightarrow(((v1\_funct\_1\ (k3\_tmap\_1\ X0\ X1\ X3\ X2\ X5))\wedge((v1\_funct\_2\ (k3\_tmap\_1\ X0\ X1\ X3\ X2\ X5)\ (u1\_struct\_0\ X2)\ (u1\_struct\_0\ X1))\wedge((v5\_pre\_topc\ (k3\_tmap\_1\ X0\ X1\ X3\ X2\ X5)\ X2\ X1)\wedge(m1\_subset\_1\ (k3\_tmap\_1\ X0\ X1\ X3\ X2\ X5)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X2)\ (u1\_struct\_0\ X1))))))\Rightarrow(((v1\_funct\_1\ (k3\_tmap\_1\ X0\ X1\ X3\ X4\ X5))\wedge((v1\_funct\_2\ (k3\_tmap\_1\ X0\ X1\ X3\ X4\ X5)\ (u1\_struct\_0\ X4)\ (u1\_struct\_0\ X1))\wedge((v5\_pre\_topc\ (k3\_tmap\_1\ X0\ X1\ X3\ X4\ X5)\ X4\ X1)\wedge(m1\_subset\_1\ (k3\_tmap\_1\ X0\ X1\ X3\ X4\ X5)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X4)\ (u1\_struct\_0\ X1))))))))))))))$$