t141_tmap_1 (TMM-neaFdjj3kp6pMEUM9gWXBSFavmqJvcA5)

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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 $v1\_tsep\_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v5\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $k1\_tsep\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_tmap\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10\_tmap\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r4\_tsep\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_pre\_topc\ X0) \wedge (l1\_pre\_topc\ X0))) \Rightarrow (\forall X1.((v1\_tsep\_1\ X1\ X0) \wedge (m1\_pre\_topc\ X1\ X0)) \Rightarrow (\forall X2.((v1\_tsep\_1\ X2\ X0) \wedge (m1\_pre\_topc\ X2\ X0)) \Rightarrow (r4\_tsep\_1\ X0\ X1\ X2))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_pre\_topc\ X0) \wedge (l1\_pre\_topc\ X0))) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v2\_pre\_topc\ X1) \wedge (l1\_pre\_topc\ X1))) \Rightarrow (\forall X2.((\neg v2\_struct\_0\ X2) \wedge (m1\_pre\_topc\ X2\ X0)) \Rightarrow (\forall X3.((\neg v2\_struct\_0\ X3) \wedge (m1\_pre\_topc\ X3\ X0)) \Rightarrow ((X0 = k1\_tsep\_1\ X0\ X2\ X3) \Rightarrow (\forall X4.((v1\_funct\_1\ X4) \wedge ((v1\_funct\_2\ X4\ (u1\_struct\_0\ X2)\ (u1\_struct\_0\ X1)) \wedge ((v5\_pre\_topc\ X4\ X2\ X1) \wedge (m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X2)\ (u1\_struct\_0\ X1))))))) \Rightarrow (\forall X5.((v1\_funct\_1\ X5) \wedge ((v1\_funct\_2\ X5\ (u1\_struct\_0\ X3)\ (u1\_struct\_0\ X1)) \wedge ((v5\_pre\_topc\ X5\ X3\ X1) \wedge (m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X3)\ (u1\_struct\_0\ X1))))))) \Rightarrow (((r2\_funct\_2\ (u1\_struct\_0\ X2)\ (u1\_struct\_0\ X1)\ (k3\_tmap\_1\ X0\ X1\ (k1\_tsep\_1\ X0\ X2\ X3)\ X2\ (k10\_tmap\_1\ X0\ X1\ X2\ X3\ X4\ X5))\ X4) \wedge ((r2\_funct\_2\ (u1\_struct\_0\ X3)\ (u1\_struct\_0\ X1)\ (k3\_tmap\_1\ X0\ X1\ (k1\_tsep\_1\ X0\ X2\ X3)\ X3\ (k10\_tmap\_1\ X0\ X1\ X2\ X3\ X4\ X5))\ X5) \wedge (r4\_tsep\_1\ X0\ X2\ X3))) \Rightarrow ((v1\_funct\_1\ (k10\_tmap\_1\ X0\ X1\ X2\ X3\ X4\ X5)) \wedge ((v1\_funct\_2\ (k10\_tmap\_1\ X0\ X1\ X2\ X3\ X4\ X5)\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)) \wedge ((v5\_pre\_topc\ (k10\_tmap\_1\ X0\ X1\ X2\ X3\ X4\ X5)\ X0\ X1) \wedge (m1\_subset\_1\ (k10\_tmap\_1\ X0\ X1\ X2\ X3\ X4\ X5)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)))))))))))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.$$
$$(((\neg v2\_struct\_0\ X0)\wedge((v2\_pre\_topc\ X0)\wedge(l1\_pre\_topc\ X0)))\wedge($$
$$((\neg v2\_struct\_0\ X1)\wedge((v2\_pre\_topc\ X1)\wedge(l1\_pre\_topc\ X1)))\wedge(($$
$$(\neg v2\_struct\_0\ X2)\wedge(m1\_pre\_topc\ X2\ X0))\wedge(((\neg v2\_struct\_0\ X3)\wedge$$
$$(m1\_pre\_topc\ X3\ X0))\wedge(((v1\_funct\_1\ X4)\wedge((v1\_funct\_2\ X4\ (u1\_struct\_0$$
$$X2)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1$$
$$(u1\_struct\_0\ X2)\ (u1\_struct\_0\ X1))))))\wedge((v1\_funct\_1\ X5)\wedge((v1\_funct\_2$$
$$X5\ (u1\_struct\_0\ X3)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X5\ (k1\_zfmisc\_1$$
$$(k2\_zfmisc\_1\ (u1\_struct\_0\ X3)\ (u1\_struct\_0\ X1)))))))))\Rightarrow(($$
$$v1\_funct\_1\ (k10\_tmap\_1\ X0\ X1\ X2\ X3\ X4\ X5))\wedge((v1\_funct\_2\ (k10\_tmap\_1$$
$$X0\ X1\ X2\ X3\ X4\ X5)\ (u1\_struct\_0\ (k1\_tsep\_1\ X0\ X2\ X3))\ (u1\_struct\_0$$
$$X1))\wedge(m1\_subset\_1\ (k10\_tmap\_1\ X0\ X1\ X2\ X3\ X4\ X5)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1$$
$$(u1\_struct\_0\ (k1\_tsep\_1\ X0\ X2\ X3))\ (u1\_struct\_0\ X1))))))$$
(3)

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_pre\_topc\ X0)\wedge(l1\_pre\_topc$$
$$X0)))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v2\_pre\_topc\ X1)\wedge(l1\_pre\_topc$$
$$X1)))\Rightarrow(\forall X2.((\neg v2\_struct\_0\ X2)\wedge((v1\_tsep\_1\ X2\ X0)\wedge(m1\_pre\_topc$$
$$X2\ X0)))\Rightarrow(\forall X3.((\neg v2\_struct\_0\ X3)\wedge((v1\_tsep\_1\ X3\ X0)\wedge($$
$$m1\_pre\_topc\ X3\ X0)))\Rightarrow(\forall X4.((v1\_funct\_1\ X4)\wedge((v1\_funct\_2$$
$$X4\ (u1\_struct\_0\ X2)\ (u1\_struct\_0\ X1))\wedge((v5\_pre\_topc\ X4\ X2\ X1)\wedge$$
$$(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X2)\ (u1\_struct\_0$$
$$X1)))))))\Rightarrow(\forall X5.((v1\_funct\_1\ X5)\wedge((v1\_funct\_2\ X5\ (u1\_struct\_0$$
$$X3)\ (u1\_struct\_0\ X1))\wedge((v5\_pre\_topc\ X5\ X3\ X1)\wedge(m1\_subset\_1\ X5$$
$$(k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X3)\ (u1\_struct\_0\ X1)))))))\Rightarrow$$
$$(((X0 = k1\_tsep\_1\ X0\ X2\ X3)\wedge((r2\_funct\_2\ (u1\_struct\_0\ X2)\ (u1\_struct\_0$$
$$X1)\ (k3\_tmap\_1\ X0\ X1\ (k1\_tsep\_1\ X0\ X2\ X3)\ X2\ (k10\_tmap\_1\ X0\ X1\ X2\ X3$$
$$X4\ X5))\ X4)\wedge(r2\_funct\_2\ (u1\_struct\_0\ X3)\ (u1\_struct\_0\ X1)\ (k3\_tmap\_1$$
$$X0\ X1\ (k1\_tsep\_1\ X0\ X2\ X3)\ X3\ (k10\_tmap\_1\ X0\ X1\ X2\ X3\ X4\ X5))\ X5)))\Rightarrow($$
$$(v1\_funct\_1\ (k10\_tmap\_1\ X0\ X1\ X2\ X3\ X4\ X5))\wedge((v1\_funct\_2\ (k10\_tmap\_1$$
$$X0\ X1\ X2\ X3\ X4\ X5)\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))\wedge((v5\_pre\_topc$$
$$(k10\_tmap\_1\ X0\ X1\ X2\ X3\ X4\ X5)\ X0\ X1)\wedge(m1\_subset\_1\ (k10\_tmap\_1\ X0$$
$$X1\ X2\ X3\ X4\ X5)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0$$
$$X1))))))))))))$$