t22_aff_4 (TMR5R51W2jVLXeNV1W1oqYUqDSy9K6iTYJi)

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Let $v7\_struct\_0 : \iota \Rightarrow o$ be given. Let $v1\_diraf : \iota \Rightarrow o$ be given. Let $l1\_analoaf : \iota \Rightarrow o$ 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 $v1\_aff\_4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_aff\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r5\_aff\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_aff\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2))) \Rightarrow (m1\_subset\_1\ X0\ X2) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0\ X0) \wedge ((v1\_diraf\ X0) \wedge (l1\_analoaf\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \Rightarrow ((\neg(\neg(r5\_aff\_1\ X0\ X1\ X2) \wedge (r5\_aff\_1\ X0\ X2\ X3)) \wedge ((\neg(r5\_aff\_1\ X0\ X1\ X2) \wedge (r5\_aff\_1\ X0\ X3\ X2)) \wedge ((\neg(r5\_aff\_1\ X0\ X2\ X1) \wedge (r5\_aff\_1\ X0\ X2\ X3)) \wedge (\neg(r5\_aff\_1\ X0\ X2\ X1) \wedge (r5\_aff\_1\ X0\ X3\ X2))))) \Rightarrow (r5\_aff\_1\ X0\ X1\ X3))))) \tag{2}$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0\ X0) \wedge ((v1\_diraf\ X0) \wedge (l1\_analoaf\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \Rightarrow (\neg(v1\_aff\_1\ X1\ X0) \wedge ((v1\_aff\_1\ X2\ X0) \wedge ((v1\_aff\_1\ X3\ X0) \wedge ((r1\_tarski\ X3\ (k1\_aff\_4\ X0\ X1\ X2)) \wedge ((\neg r5\_aff\_1\ X0\ X2\ X3) \wedge (\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0)) \Rightarrow (\neg(X4 \in X2) \wedge (X4 \in X3)))))))))) \tag{3}$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0\ X0)\wedge((v1\_diraf\ X0)\wedge(l1\_analoaf\ X0)))\Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow (((v1\_aff\_1\ X1\ X0)\wedge((v1\_aff\_1\ X2\ X0)\wedge((v1\_aff\_1\ X3\ X0)\wedge(r1\_tarski\ X3\ (k1\_aff\_4\ X0\ X1\ X2)))))\Rightarrow((r5\_aff\_1\ X0\ X1\ X3)\vee(k1\_aff\_4\ X0\ X1\ X3 = k1\_aff\_4\ X0\ X1\ X2))))))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v7\_struct\_0\ X0)\wedge((v1\_diraf\ X0)\wedge(l1\_analoaf\ X0)))\wedge((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))))\Rightarrow((r5\_aff\_1\ X0\ X1\ X2)\Rightarrow(r5\_aff\_1\ X0\ X2\ X1)) \tag{5}$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0\ X0)\wedge((v1\_diraf\ X0)\wedge(l1\_analoaf\ X0)))\Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow ((v1\_aff\_4\ X1\ X0)\Leftrightarrow(\exists X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\wedge(\exists X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\wedge((v1\_aff\_1\ X2\ X0)\wedge((v1\_aff\_1\ X3\ X0)\wedge((\neg r5\_aff\_1\ X0\ X2\ X3)\wedge(X1 = k1\_aff\_4\ X0\ X2\ X3)))))))) \tag{6}$$

Theorem 1

$$\forall X0.((\neg v7\_struct\_0\ X0)\wedge((v1\_diraf\ X0)\wedge(l1\_analoaf\ X0)))\Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow (\neg(v1\_aff\_4\ X1\ X0)\wedge((v1\_aff\_1\ X2\ X0)\wedge((v1\_aff\_1\ X3\ X0)\wedge((r1\_tarski\ X2\ X1)\wedge((r1\_tarski\ X3\ X1)\wedge((\neg r5\_aff\_1\ X0\ X2\ X3)\wedge(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0))\Rightarrow(\neg(X4 \in X2)\wedge(X4 \in X3))))))))))))$$