l63_afproj (TMFp3MCgkpzuHMcoehh6zNApmpV8zjWMUM8)

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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 $u1\_incsp\_1 : \iota \Rightarrow \iota$ be given. Let $k13\_afproj : \iota \Rightarrow \iota$ be given. Let $u2\_incsp\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_aff\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_aff\_4 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $r1\_incsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k2\_aff\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r5\_aff\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_aff\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_afproj : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_aff\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\neg(X0 \in X1) \wedge ((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2)) \wedge (v1\_xboole\_0\ X2)) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0\ X0) \wedge ((v1\_diraf\ X0) \wedge (l1\_analoaf\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \Rightarrow (((v1\_aff\_1\ X3\ X0) \wedge ((X1 \in X3) \wedge (X2 \in X3))) \Rightarrow ((X1 = X2) \vee (X3 = k2\_aff\_1\ X0\ X1\ X2))))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2))) \Rightarrow (m1\_subset\_1\ X0\ X2) \tag{3}$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ X1))\Leftrightarrow(r1\_tarski\ X0\ X1) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ X1)\Rightarrow((v1\_xboole\_0\ X1)\vee(X0\in X1)) \tag{6}$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0\ X0)\wedge((v1\_diraf\ X0)\wedge(l1\_analoaf\ X0)))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_incsp\_1\ (k13\_afproj\ X0)))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u2\_incsp\_1\ (k13\_afproj\ X0)))\Rightarrow(((X3 = k5\_afproj\ X0\ X1)\wedge((k4\_tarski\ X2\ np\_\_1 = X4)\wedge((v1\_aff\_1\ X1\ X0)\wedge(v1\_aff\_1\ X2\ X0))))\Rightarrow((r1\_incsp\_1\ (k13\_afproj\ X0)\ X3\ X4)\Leftrightarrow(r1\_aff\_4\ X0\ X1\ X2)))))))) \tag{7}$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0\ X0)\wedge((v1\_diraf\ X0)\wedge(l1\_analoaf\ X0)))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow(((v1\_aff\_4\ X2\ X0)\wedge((v1\_aff\_1\ X3\ X0)\wedge((X1\in X2)\wedge(r1\_tarski\ X3\ X2))))\Rightarrow(r1\_tarski\ (k2\_aff\_4\ X0\ X1\ X3)\ X2))))) \tag{8}$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0\ X0)\wedge((v1\_diraf\ X0)\wedge(l1\_analoaf\ X0)))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_incsp\_1\ (k13\_afproj\ X0)))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u2\_incsp\_1\ (k13\_afproj\ X0)))\Rightarrow(((X1 = X3)\wedge(k4\_tarski\ X2\ np\_\_1 = X4))\Rightarrow((r1\_incsp\_1\ (k13\_afproj\ X0)\ X3\ X4)\Leftrightarrow((v1\_aff\_1\ X2\ X0)\wedge(X1\in X2)))))))) \tag{9}$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0\ X0)\wedge((v1\_diraf\ X0)\wedge(l1\_analoaf\ X0)))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_incsp\_1\ (k13\_afproj\ X0)))\Leftrightarrow(\neg(\neg m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\wedge(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow(\neg(X1 = k5\_afproj\ X0\ X2)\wedge(v1\_aff\_1\ X2\ X0))))) \tag{10}$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0\ X0)\wedge((v1\_diraf\ X0)\wedge(l1\_analoaf\ X0)))\Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow(((v1\_aff\_4\ X3\ X0)\wedge((X1\in X3)\wedge(X2\in X3)))\Rightarrow((X1 = X2)\vee(r1\_tarski\ (k2\_aff\_1\ X0\ X1\ X2)\ X3))))))) \tag{11}$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0\ X0)\wedge((v1\_diraf\ X0)\wedge(l1\_analoaf\ X0)))\Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow (((v1\_aff\_1\ X1\ X0)\wedge(v1\_aff\_1\ X2\ X0))\Rightarrow((k5\_afproj\ X0\ X1 = k5\_afproj\ X0\ X2)\Leftrightarrow(r5\_aff\_1\ X0\ X1\ X2))))) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v7\_struct\_0\ X0)\wedge((v1\_diraf\ X0)\wedge(l1\_analoaf\ X0)))\wedge((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))))\Rightarrow((r5\_aff\_1\ X0\ X1\ X2)\Rightarrow(r5\_aff\_1\ X0\ X2\ X1)) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v7\_struct\_0\ X0)\wedge((v1\_diraf\ X0)\wedge(l1\_analoaf\ X0)))\wedge((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))))\Rightarrow(m1\_subset\_1\ (k2\_aff\_4\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \tag{14}$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0\ X0)\wedge((v1\_diraf\ X0)\wedge(l1\_analoaf\ X0)))\Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow((v1\_aff\_1\ X2\ X0)\Rightarrow(\forall X3.\ (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow((X3 = k2\_aff\_4\ X0\ X1\ X2)\Leftrightarrow((X1\in X3)\wedge(r5\_aff\_1\ X0\ X2\ X3))))))) \tag{15}$$

Theorem 1

$$\forall X0.((\neg v7\_struct\_0\ X0)\wedge((v1\_diraf\ X0)\wedge(l1\_analoaf\ X0)))\Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow (\forall X4.(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow (\forall X5.(m1\_subset\_1\ X5\ (u1\_incsp\_1\ (k13\_afproj\ X0)))\Rightarrow(\forall X6.(m1\_subset\_1\ X6\ (u1\_incsp\_1\ (k13\_afproj\ X0)))\Rightarrow(\forall X7.(m1\_subset\_1\ X7\ (u2\_incsp\_1\ (k13\_afproj\ X0)))\Rightarrow(\forall X8.(m1\_subset\_1\ X8\ (u2\_incsp\_1\ (k13\_afproj\ X0)))\Rightarrow(\forall X9.(m1\_subset\_1\ X9\ (u2\_incsp\_1\ (k13\_afproj\ X0)))\Rightarrow(((v1\_aff\_1\ X1\ X0)\wedge((v1\_aff\_1\ X2\ X0)\wedge((v1\_aff\_4\ X3\ X0)\wedge((r1\_tarski\ X1\ X3)\wedge((r1\_tarski\ X2\ X3)\wedge((X7 = k4\_tarski\ X1\ np\_\_1)\wedge((X8 = k4\_tarski\ X2\ np\_\_1)\wedge((r1\_incsp\_1\ (k13\_afproj\ X0)\ X5\ X7)\wedge((r1\_incsp\_1\ (k13\_afproj\ X0)\ X6\ X8)\wedge((r1\_incsp\_1\ (k13\_afproj\ X0)\ X5\ X9)\wedge((r1\_incsp\_1\ (k13\_afproj\ X0)\ X6\ X9)\wedge((X9 = k4\_tarski\ X4\ np\_\_1)\wedge(v1\_aff\_1\ X4\ X0))))))))))))\Rightarrow((X5 = X6)\vee(r1\_tarski\ X4\ X3)))))))))))$$