t24_anproj_1 (TMMi4AgFQZ4RvgtBXKmeVdGS9YxZsMe3tVL)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v7\_struct\_0 : \iota \Rightarrow o$ be given. Let $v13\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v2\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v3\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v4\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v5\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v6\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v7\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v8\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $l1\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $k3\_xtuple\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_collsp : \iota \Rightarrow \iota$ be given. Let $k5\_anproj\_1 : \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k2\_anproj\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v9\_struct\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2\_anproj\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_anproj\_1 : \iota \Rightarrow \iota$ be given. Let $k4\_anproj\_1 : \iota \Rightarrow \iota$ be given. Let $m1\_collsp : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((\neg v7\_struct\_0\ X0) \wedge ((v13\_algstr\_0\ X0) \wedge ((v2\_rlvect\_1\ X0) \wedge ((v3\_rlvect\_1\ X0) \wedge ((v4\_rlvect\_1\ X0) \wedge ((v5\_rlvect\_1\ X0) \wedge ((v6\_rlvect\_1\ X0) \wedge ((v7\_rlvect\_1\ X0) \wedge ((v8\_rlvect\_1\ X0) \wedge (l1\_rlvect\_1\ X0))))))))) \Rightarrow ((u1\_struct\_0\ (k5\_anproj\_1\ X0) = k3\_anproj\_1\ X0) \wedge (u1\_collsp\ (k5\_anproj\_1\ X0) = k4\_anproj\_1\ X0)) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((\neg v7\_struct\_0\ X0) \wedge ((v13\_algstr\_0\ X0) \wedge ((v2\_rlvect\_1\ X0) \wedge ((v3\_rlvect\_1\ X0) \wedge ((v4\_rlvect\_1\ X0) \wedge ((v5\_rlvect\_1\ X0) \wedge ((v6\_rlvect\_1\ X0) \wedge ((v7\_rlvect\_1\ X0) \wedge ((v8\_rlvect\_1\ X0) \wedge (l1\_rlvect\_1\ X0))))))))))) \Rightarrow (m1\_collsp\ (k4\_anproj\_1\ X0)\ (k3\_anproj\_1\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((\neg v7\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v5\_rlvect\_1\ X0)\wedge((v6\_rlvect\_1\ X0)\wedge((v7\_rlvect\_1\ X0)\wedge((v8\_rlvect\_1\ X0)\wedge(l1\_rlvect\_1\ X0))))))))))\Rightarrow(\forall X1.(m1\_collsp\ X1\ (k3\_anproj\_1\ X0))\Rightarrow((X1 = k4\_anproj\_1\ X0)\Leftrightarrow(\forall X2.\forall X3.\forall X4.\ (k3\_xtuple\_0\ X2\ X3\ X4 \in X1)\Leftrightarrow(\exists X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0))\wedge(\exists X6.(m1\_subset\_1\ X6\ (u1\_struct\_0\ X0))\wedge(\exists X7.\ (m1\_subset\_1\ X7\ (u1\_struct\_0\ X0))\wedge((X2 = k2\_anproj\_1\ X0\ X5)\wedge((X3 = k2\_anproj\_1\ X0\ X6)\wedge((X4 = k2\_anproj\_1\ X0\ X7)\wedge((\neg v9\_struct\_0\ X5\ X0)\wedge((\neg v9\_struct\_0\ X6\ X0)\wedge((\neg v9\_struct\_0\ X7\ X0)\wedge(r2\_anproj\_1\ X0\ X5\ X6\ X7)))))))))))) \tag{3}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v2\_struct\_0\ X3)\wedge((\neg v7\_struct\_0\ X3)\wedge((v13\_algstr\_0\ X3)\wedge((v2\_rlvect\_1\ X3)\wedge((v3\_rlvect\_1\ X3)\wedge((v4\_rlvect\_1\ X3)\wedge((v5\_rlvect\_1\ X3)\wedge((v6\_rlvect\_1\ X3)\wedge((v7\_rlvect\_1\ X3)\wedge((v8\_rlvect\_1\ X3)\wedge(l1\_rlvect\_1\ X3)))))))))))\Rightarrow(\neg(k3\_xtuple\_0\ X0\ X1\ X2 \in u1\_collsp\ (k5\_anproj\_1\ X3))\wedge(\forall X4.\ (m1\_subset\_1\ X4\ (u1\_struct\_0\ X3))\Rightarrow(\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X3))\Rightarrow(\forall X6.(m1\_subset\_1\ X6\ (u1\_struct\_0\ X3))\Rightarrow(\neg(X0 = k2\_anproj\_1\ X3\ X4)\wedge((X1 = k2\_anproj\_1\ X3\ X5)\wedge((X2 = k2\_anproj\_1\ X3\ X6)\wedge((\neg v9\_struct\_0\ X4\ X3)\wedge((\neg v9\_struct\_0\ X5\ X3)\wedge((\neg v9\_struct\_0\ X6\ X3)\wedge(r2\_anproj\_1\ X3\ X4\ X5\ X6)))))))))))$$