t14_mod_2 (TMFjqqyoqXKEhSHxR-WWRvhTqemQkx9MvfpP)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v13\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v3\_group\_1 : \iota \Rightarrow o$ be given. Let $v4\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $v5\_vectsp\_1 : \iota \Rightarrow o$ 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 $l6\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v2\_mod\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3\_mod\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1\_mod\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_mod\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_mod\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v8\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v9\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v10\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v11\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $g1\_mod\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_mod\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u3\_mod\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_mod\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2\_mod\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))\wedge(l1\_mod\_2\ X1\ X0))\Rightarrow((v1\_funct\_1\ (u3\_mod\_2\ X0\ X1))\wedge((v1\_funct\_2\ (u3\_mod\_2\ X0\ X1)\ (u1\_struct\_0\ (u1\_mod\_2\ X0\ X1))\ (u1\_struct\_0\ (u2\_mod\_2\ X0\ X1)))\wedge(m1\_subset\_1\ (u3\_mod\_2\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ (u1\_mod\_2\ X0\ X1))\ (u1\_struct\_0\ (u2\_mod\_2\ X0\ X1))))))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))\wedge(((v3\_mod\_2\ X1\ X0)\wedge(l1\_mod\_2\ X1\ X0))\wedge((v3\_mod\_2\ X2\ X0)\wedge(l1\_mod\_2\ X2\ X0))))\Rightarrow((v2\_mod\_2\ (k8\_mod\_2\ X0\ X1\ X2)\ X0)\wedge((v3\_mod\_2\ (k8\_mod\_2\ X0\ X1\ X2)\ X0)\wedge(l1\_mod\_2\ (k8\_mod\_2\ X0\ X1\ X2)\ X0))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))\wedge(l1\_mod\_2\ X1\ X0))\Rightarrow((\neg v2\_struct\_0\ (k3\_mod\_2\ X0\ X1))\wedge((v13\_algstr\_0\ (k3\_mod\_2\ X0\ X1))\wedge((v8\_vectsp\_1\ (k3\_mod\_2\ X0\ X1)\ X0)\wedge((v9\_vectsp\_1\ (k3\_mod\_2\ X0\ X1)\ X0)\wedge((v10\_vectsp\_1\ (k3\_mod\_2\ X0\ X1)\ X0)\wedge((v11\_vectsp\_1\ (k3\_mod\_2\ X0\ X1)\ X0)\wedge((v2\_rlvect\_1\ (k3\_mod\_2\ X0\ X1))\wedge((v3\_rlvect\_1\ (k3\_mod\_2\ X0\ X1))\wedge((v4\_rlvect\_1\ (k3\_mod\_2\ X0\ X1))\wedge(l1\_vectsp\_1\ (k3\_mod\_2\ X0\ X1)\ X0)))))))))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))\wedge(l1\_mod\_2\ X1\ X0))\Rightarrow((\neg v2\_struct\_0\ (k2\_mod\_2\ X0\ X1))\wedge((v13\_algstr\_0\ (k2\_mod\_2\ X0\ X1))\wedge((v8\_vectsp\_1\ (k2\_mod\_2\ X0\ X1)\ X0)\wedge((v9\_vectsp\_1\ (k2\_mod\_2\ X0\ X1)\ X0)\wedge((v10\_vectsp\_1\ (k2\_mod\_2\ X0\ X1)\ X0)\wedge((v11\_vectsp\_1\ (k2\_mod\_2\ X0\ X1)\ X0)\wedge((v2\_rlvect\_1\ (k2\_mod\_2\ X0\ X1))\wedge((v3\_rlvect\_1\ (k2\_mod\_2\ X0\ X1))\wedge((v4\_rlvect\_1\ (k2\_mod\_2\ X0\ X1))\wedge(l1\_vectsp\_1\ (k2\_mod\_2\ X0\ X1)\ X0)))))))))) \tag{4}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))\Rightarrow(\forall X1.(l1\_mod\_2\ X1\ X0)\Rightarrow(k3\_mod\_2\ X0\ X1 = u2\_mod\_2\ X0\ X1)) \tag{5}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))\Rightarrow(\forall X1.(l1\_mod\_2\ X1\ X0)\Rightarrow(k2\_mod\_2\ X0\ X1 = u1\_mod\_2\ X0\ X1)) \tag{6}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))\Rightarrow(\forall X1.((v3\_mod\_2\ X1\ X0)\wedge(l1\_mod\_2\ X1\ X0))\Rightarrow(\forall X2.((v3\_mod\_2\ X2\ X0)\wedge(l1\_mod\_2\ X2\ X0))\Rightarrow((k2\_mod\_2\ X0\ X1 = k3\_mod\_2\ X0\ X2)\Rightarrow(\forall X3.((v2\_mod\_2\ X3\ X0)\wedge((v3\_mod\_2\ X3\ X0)\wedge(l1\_mod\_2\ X3\ X0)))\Rightarrow((X3 = k8\_mod\_2\ X0\ X1\ X2)\Leftrightarrow(\forall X4.((\neg v2\_struct\_0\ X4)\wedge((v13\_algstr\_0\ X4)\wedge((v8\_vectsp\_1\ X4\ X0)\wedge((v9\_vectsp\_1\ X4\ X0)\wedge((v10\_vectsp\_1\ X4\ X0)\wedge((v11\_vectsp\_1\ X4\ X0)\wedge((v2\_rlvect\_1\ X4)\wedge((v3\_rlvect\_1\ X4)\wedge((v4\_rlvect\_1\ X4)\wedge(l1\_vectsp\_1\ X4\ X0))))))))))\Rightarrow(\forall X5.((\neg v2\_struct\_0\ X5)\wedge((v13\_algstr\_0\ X5)\wedge((v8\_vectsp\_1\ X5\ X0)\wedge((v9\_vectsp\_1\ X5\ X0)\wedge((v10\_vectsp\_1\ X5\ X0)\wedge((v11\_vectsp\_1\ X5\ X0)\wedge((v2\_rlvect\_1\ X5)\wedge((v3\_rlvect\_1\ X5)\wedge((v4\_rlvect\_1\ X5)\wedge(l1\_vectsp\_1\ X5\ X0))))))))))\Rightarrow(\forall X6.((\neg v2\_struct\_0\ X6)\wedge((v13\_algstr\_0\ X6)\wedge((v8\_vectsp\_1\ X6\ X0)\wedge((v9\_vectsp\_1\ X6\ X0)\wedge((v10\_vectsp\_1\ X6\ X0)\wedge((v11\_vectsp\_1\ X6\ X0)\wedge((v2\_rlvect\_1\ X6)\wedge((v3\_rlvect\_1\ X6)\wedge((v4\_rlvect\_1\ X6)\wedge(l1\_vectsp\_1\ X6\ X0))))))))))\Rightarrow(\forall X7.((v1\_funct\_1\ X7)\wedge((v1\_funct\_2\ X7\ (u1\_struct\_0\ X5)\ (u1\_struct\_0\ X6))\wedge(m1\_subset\_1\ X7\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X5)\ (u1\_struct\_0\ X6))))))\Rightarrow(\forall X8.((v1\_funct\_1\ X8)\wedge((v1\_funct\_2\ X8\ (u1\_struct\_0\ X4)\ (u1\_struct\_0\ X5))\wedge(m1\_subset\_1\ X8\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X4)\ (u1\_struct\_0\ X5))))))\Rightarrow(((g1\_mod\_2\ X0\ (u1\_mod\_2\ X0\ X1)\ (u2\_mod\_2\ X0\ X1)\ (u3\_mod\_2\ X0\ X1) = g1\_mod\_2\ X0\ X5\ X6\ X7)\wedge(g1\_mod\_2\ X0\ (u1\_mod\_2\ X0\ X2)\ (u2\_mod\_2\ X0\ X2)\ (u3\_mod\_2\ X0\ X2) = g1\_mod\_2\ X0\ X4\ X5\ X8))\Rightarrow(X3 = g1\_mod\_2\ X0\ X4\ X6\ (k1\_partfun1\ (u1\_struct\_0\ X4)\ (u1\_struct\_0\ X5)\ (u1\_struct\_0\ X5)\ (u1\_struct\_0\ X6)\ X8\ X7)))))))))))) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))\wedge(l1\_mod\_2\ X1\ X0))\Rightarrow((v2\_mod\_2\ X1\ X0)\Rightarrow(X1 = g1\_mod\_2\ X0\ (u1\_mod\_2\ X0\ X1)\ (u2\_mod\_2\ X0\ X1)\ (u3\_mod\_2\ X0\ X1))) \tag{8}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))\Rightarrow(\forall X1.((v2\_mod\_2\ X1\ X0)\wedge((v3\_mod\_2\ X1\ X0)\wedge(l1\_mod\_2\ X1\ X0)))\Rightarrow(\forall X2.((v2\_mod\_2\ X2\ X0)\wedge((v3\_mod\_2\ X2\ X0)\wedge(l1\_mod\_2\ X2\ X0)))\Rightarrow(\neg(k2\_mod\_2\ X0\ X2 = k3\_mod\_2\ X0\ X1)\wedge(\forall X3.((\neg v2\_struct\_0\ X3)\wedge((v13\_algstr\_0\ X3)\wedge((v8\_vectsp\_1\ X3\ X0)\wedge((v9\_vectsp\_1\ X3\ X0)\wedge((v10\_vectsp\_1\ X3\ X0)\wedge((v11\_vectsp\_1\ X3\ X0)\wedge((v2\_rlvect\_1\ X3)\wedge((v3\_rlvect\_1\ X3)\wedge((v4\_rlvect\_1\ X3)\wedge(l1\_vectsp\_1\ X3\ X0))))))))))\Rightarrow(\forall X4.((\neg v2\_struct\_0\ X4)\wedge((v13\_algstr\_0\ X4)\wedge((v8\_vectsp\_1\ X4\ X0)\wedge((v9\_vectsp\_1\ X4\ X0)\wedge((v10\_vectsp\_1\ X4\ X0)\wedge((v11\_vectsp\_1\ X4\ X0)\wedge((v2\_rlvect\_1\ X4)\wedge((v3\_rlvect\_1\ X4)\wedge((v4\_rlvect\_1\ X4)\wedge(l1\_vectsp\_1\ X4\ X0))))))))))\Rightarrow(\forall X5.((\neg v2\_struct\_0\ X5)\wedge((v13\_algstr\_0\ X5)\wedge((v8\_vectsp\_1\ X5\ X0)\wedge((v9\_vectsp\_1\ X5\ X0)\wedge((v10\_vectsp\_1\ X5\ X0)\wedge((v11\_vectsp\_1\ X5\ X0)\wedge((v2\_rlvect\_1\ X5)\wedge((v3\_rlvect\_1\ X5)\wedge((v4\_rlvect\_1\ X5)\wedge(l1\_vectsp\_1\ X5\ X0))))))))))\Rightarrow(\forall X6.((v1\_funct\_1\ X6)\wedge((v1\_funct\_2\ X6\ (u1\_struct\_0\ X3)\ (u1\_struct\_0\ X4))\wedge(m1\_subset\_1\ X6\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X3)\ (u1\_struct\_0\ X4))))))\Rightarrow(\forall X7.((v1\_funct\_1\ X7)\wedge((v1\_funct\_2\ X7\ (u1\_struct\_0\ X4)\ (u1\_struct\_0\ X5))\wedge(m1\_subset\_1\ X7\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X4)\ (u1\_struct\_0\ X5))))))\Rightarrow(\neg(X1 = g1\_mod\_2\ X0\ X3\ X4\ X6)\wedge((X2 = g1\_mod\_2\ X0\ X4\ X5\ X7)\wedge(k8\_mod\_2\ X0\ X2\ X1 = g1\_mod\_2\ X0\ X3\ X5\ (k1\_partfun1\ (u1\_struct\_0\ X3)\ (u1\_struct\_0\ X4)\ (u1\_struct\_0\ X4)\ (u1\_struct\_0\ X5)\ X6\ X7)))))))))))$$