t8_mod_2 (TMaukKz5wgZxWE2Z3SyZsiMqmsekSof1itu)

October 27, 2020

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 $v8\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v2\_mod\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_mod\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $u1\_mod\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2\_mod\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u3\_mod\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v13\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_mod\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3\_mod\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1\_mod\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v13\_algstr\_0\ X0) \wedge ((v3\_group\_1\ X0) \wedge ((v4\_vectsp\_1\ X0) \wedge ((v5\_vectsp\_1\ X0) \wedge ((v2\_rlvect\_1\ X0) \wedge ((v3\_rlvect\_1\ X0) \wedge ((v4\_rlvect\_1\ X0) \wedge (l6\_algstr\_0\ X0))))))))) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v13\_algstr\_0\ X1) \wedge ((v8\_vectsp\_1\ X1\ X0) \wedge ((v9\_vectsp\_1\ X1\ X0) \wedge ((v10\_vectsp\_1\ X1\ X0) \wedge ((v11\_vectsp\_1\ X1\ X0) \wedge ((v2\_rlvect\_1\ X1) \wedge ((v3\_rlvect\_1\ X1) \wedge ((v4\_rlvect\_1\ X1) \wedge (l1\_vectsp\_1\ X1\ X0))))))))) \Rightarrow (\forall X2.((\neg v2\_struct\_0\ X2) \wedge ((v13\_algstr\_0\ X2) \wedge ((v8\_vectsp\_1\ X2\ X0) \wedge ((v9\_vectsp\_1\ X2\ X0) \wedge ((v10\_vectsp\_1\ X2\ X0) \wedge ((v11\_vectsp\_1\ X2\ X0) \wedge ((v2\_rlvect\_1\ X2) \wedge ((v3\_rlvect\_1\ X2) \wedge ((v4\_rlvect\_1\ X2) \wedge (l1\_vectsp\_1\ X2\ X0))))))))) \Rightarrow (\forall X3.(m1\_mod\_2\ X3\ X0\ X1\ X2) \Rightarrow (\exists X4.((v1\_funct\_1\ X4) \wedge ((v1\_funct\_2\ X4\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X2)) \wedge (m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X2)))))) \wedge ((g1\_mod\_2\ X0\ (u1\_mod\_2\ X0\ X3)\ (u2\_mod\_2\ X0\ X3)\ (u3\_mod\_2\ X0\ X3) = g1\_mod\_2\ X0\ X1\ X2\ X4) \wedge ((v13\_vectsp\_1\ X4\ X1\ X2) \wedge (v1\_mod\_2\ X4\ X0\ X1\ X2)))))))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0)))))))))\wedge(((\neg v2\_struct\_0\ X1)\wedge((v13\_algstr\_0\ X1)\wedge((v8\_vectsp\_1\ X1\ X0)\wedge((v9\_vectsp\_1\ X1\ X0)\wedge((v10\_vectsp\_1\ X1\ X0)\wedge((v11\_vectsp\_1\ X1\ X0)\wedge((v2\_rlvect\_1\ X1)\wedge((v3\_rlvect\_1\ X1)\wedge((v4\_rlvect\_1\ X1)\wedge(l1\_vectsp\_1\ X1\ X0)))))))))\wedge(((\neg v2\_struct\_0\ X2)\wedge((v13\_algstr\_0\ X2)\wedge((v8\_vectsp\_1\ X2\ X0)\wedge((v9\_vectsp\_1\ X2\ X0)\wedge((v10\_vectsp\_1\ X2\ X0)\wedge((v11\_vectsp\_1\ X2\ X0)\wedge((v2\_rlvect\_1\ X2)\wedge((v3\_rlvect\_1\ X2)\wedge((v4\_rlvect\_1\ X2)\wedge(l1\_vectsp\_1\ X2\ X0)))))))))\Rightarrow(\forall X3.(m1\_mod\_2\ X3\ X0\ X1\ X2)\Rightarrow((v3\_mod\_2\ X3\ X0)\wedge(l1\_mod\_2\ X3\ X0))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0)))))))))\wedge(l1\_mod\_2\ X1\ X0))\Rightarrow((v2\_mod\_2\ X1\ X0)\Rightarrow(X1 = g1\_mod\_2\ X0\ (u1\_mod\_2\ X0\ X1)\ (u2\_mod\_2\ X0\ X1)\ (u3\_mod\_2\ X0\ X1))) \tag{3}$$

Theorem 1

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