t4_mod_4 (TM-PCb2YK5qXmwP6gVf2MTF2wE8hS1Sj6nFA)

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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 $k2\_mod\_4 : \iota \Rightarrow \iota$ be given. Let $v36\_algstr\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v3\_group\_1\ X0) \wedge (l6\_algstr\_0\ X0))) \Rightarrow ((v36\_algstr\_0\ (k2\_mod\_4\ X0)) \wedge (v3\_group\_1\ (k2\_mod\_4\ X0))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v13\_algstr\_0\ X0) \wedge (l6\_algstr\_0\ X0))) \Rightarrow ((v13\_algstr\_0\ (k2\_mod\_4\ X0)) \wedge (v36\_algstr\_0\ (k2\_mod\_4\ X0))) \tag{2}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_rlvect\_1\ X0) \wedge (l6\_algstr\_0\ X0))) \Rightarrow ((v36\_algstr\_0\ (k2\_mod\_4\ X0)) \wedge (v2\_rlvect\_1\ (k2\_mod\_4\ X0))) \tag{3}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v13\_algstr\_0\ X0) \wedge ((v3\_rlvect\_1\ X0) \wedge ((v4\_rlvect\_1\ X0) \wedge (l6\_algstr\_0\ X0))))) \Rightarrow ((v13\_algstr\_0\ (k2\_mod\_4\ X0)) \wedge ((v36\_algstr\_0\ (k2\_mod\_4\ X0)) \wedge ((v3\_rlvect\_1\ (k2\_mod\_4\ X0)) \wedge (v4\_rlvect\_1\ (k2\_mod\_4\ X0))))) \tag{4}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v4\_vectsp\_1\ X0) \wedge (l6\_algstr\_0\ X0))) \Rightarrow ((v36\_algstr\_0\ (k2\_mod\_4\ X0)) \wedge (v4\_vectsp\_1\ (k2\_mod\_4\ X0))) \tag{5}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l6\_algstr\_0\ X0)) \Rightarrow ((\neg v2\_struct\_0\ (k2\_mod\_4\ X0)) \wedge (v36\_algstr\_0\ (k2\_mod\_4\ X0))) \tag{6}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge(l6\_algstr\_0\ X0)))\Rightarrow((v36\_algstr\_0\ (k2\_mod\_4\ X0))\wedge(v5\_vectsp\_1\ (k2\_mod\_4\ X0))) \tag{7}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l6\_algstr\_0\ X0))\Rightarrow((v36\_algstr\_0\ (k2\_mod\_4\ X0))\wedge(l6\_algstr\_0\ (k2\_mod\_4\ X0))) \tag{8}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0)))))))))\Rightarrow((\neg v2\_struct\_0\ (k2\_mod\_4\ X0))\wedge((v13\_algstr\_0\ (k2\_mod\_4\ X0))\wedge((v36\_algstr\_0\ (k2\_mod\_4\ X0))\wedge((v3\_group\_1\ (k2\_mod\_4\ X0))\wedge((v4\_vectsp\_1\ (k2\_mod\_4\ X0))\wedge((v5\_vectsp\_1\ (k2\_mod\_4\ X0))\wedge((v2\_rlvect\_1\ (k2\_mod\_4\ X0))\wedge((v3\_rlvect\_1\ (k2\_mod\_4\ X0))\wedge((v4\_rlvect\_1\ (k2\_mod\_4\ X0))\wedge(l6\_algstr\_0\ (k2\_mod\_4\ X0))))))))))$$