t12_ec_pf_2 (TMPfRK1rpXiLHFup3aAd4jQa37A1heGNdLW)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v6\_struct\_0 : \iota \Rightarrow o$ be given. Let $v13\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v33\_algstr\_0 : \iota \Rightarrow o$ 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 $v3\_group\_1 : \iota \Rightarrow o$ be given. Let $v5\_group\_1 : \iota \Rightarrow o$ be given. Let $v4\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $v5\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $l6\_algstr\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k8\_group\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l2\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l5\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l4\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l4\_struct\_0 : \iota \Rightarrow o$ be given. Let $l3\_struct\_0 : \iota \Rightarrow o$ be given. Let $l3\_algstr\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((\neg v6\_struct\_0\ X0) \wedge ((v13\_algstr\_0\ X0) \wedge ((v33\_algstr\_0\ X0) \wedge ((v2\_rlvect\_1\ X0) \wedge ((v3\_rlvect\_1\ X0) \wedge ((v4\_rlvect\_1\ X0) \wedge ((v3\_group\_1\ X0) \wedge ((v5\_group\_1\ X0) \wedge ((v4\_vectsp\_1\ X0) \wedge ((v5\_vectsp\_1\ X0) \wedge (l6\_algstr\_0\ X0))))))))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0)) \Rightarrow ((k8\_group\_1\ X0\ (k8\_group\_1\ X0\ (k8\_group\_1\ X0\ X1\ X2)\ X3)\ X4 = k8\_group\_1\ X0\ X1\ (k8\_group\_1\ X0\ (k8\_group\_1\ X0\ X2\ X3)\ X4)) \wedge (k8\_group\_1\ X0\ (k8\_group\_1\ X0\ (k8\_group\_1\ X0\ (k8\_group\_1\ X0\ X1\ X2)\ X3)\ X4)\ X5 = k8\_group\_1\ X0\ X1\ (k8\_group\_1\ X0\ (k8\_group\_1\ X0\ (k8\_group\_1\ X0\ X2\ X3)\ X4)\ X5)))))))) \tag{1}$$

Assume the following.

$$\forall X0.(l6\_algstr\_0\ X0) \Rightarrow ((l2\_algstr\_0\ X0) \wedge (l5\_algstr\_0\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.(l5\_algstr\_0\ X0) \Rightarrow ((l4\_algstr\_0\ X0) \wedge (l4\_struct\_0\ X0)) \tag{3}$$

Assume the following.

$$\forall X0.(l4\_algstr\_0\ X0) \Rightarrow ((l3\_struct\_0\ X0) \wedge (l3\_algstr\_0\ X0)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge((v5\_group\_1\ X0)\wedge(l3\_algstr\_0\ X0)))\wedge((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))))\Rightarrow(m1\_subset\_1\ (k8\_group\_1\ X0\ X1\ X2)\ (u1\_struct\_0\ X0)) \tag{5}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((\neg v6\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v33\_algstr\_0\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge((v5\_group\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0))\Rightarrow(\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0))\Rightarrow(\forall X6.(m1\_subset\_1\ X6\ (u1\_struct\_0\ X0))\Rightarrow((k8\_group\_1\ X0\ (k8\_group\_1\ X0\ (k8\_group\_1\ X0\ (k8\_group\_1\ X0\ (k8\_group\_1\ X0\ X1\ X2)\ X3)\ X4)\ X5)\ X6 = k8\_group\_1\ X0\ X1\ (k8\_group\_1\ X0\ (k8\_group\_1\ X0\ (k8\_group\_1\ X0\ (k8\_group\_1\ X0\ X2\ X3)\ X4)\ X5)\ X6))\wedge(k8\_group\_1\ X0\ (k8\_group\_1\ X0\ (k8\_group\_1\ X0\ (k8\_group\_1\ X0\ (k8\_group\_1\ X0\ X1\ X2)\ X3)\ X4)\ X5)\ X6 = k8\_group\_1\ X0\ (k8\_group\_1\ X0\ (k8\_group\_1\ X0\ X1\ (k8\_group\_1\ X0\ (k8\_group\_1\ X0\ X2\ X3)\ X4))\ X5)\ X6))))))))$$