t57_fvaluat1 (TMTU5hhQWuuNYCkAXk1ESRXH7363Tp6tQR7)

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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 $v3\_group\_1 : \iota \Rightarrow o$ 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 $v1\_realset2 : \iota \Rightarrow o$ be given. Let $l6\_algstr\_0 : \iota \Rightarrow o$ be given. Let $m1\_fvaluat1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3\_fvaluat1 : \iota \Rightarrow o$ be given. Let $k5\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k7\_fvaluat1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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. Let $v36\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v5\_group\_1 : \iota \Rightarrow o$ be given. Let $v4\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $u3\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k6\_fvaluat1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_algstr\_0 : \iota \Rightarrow \iota$ be given. Let $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2\_algstr\_0 : \iota \Rightarrow \iota$ be given. Let $u2\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k4\_struct\_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(l6\_algstr\_0\ X0) \Rightarrow ((l2\_algstr\_0\ X0) \wedge (l5\_algstr\_0\ X0)) \tag{1}$$

Assume the following.

$$\forall X0.(l5\_algstr\_0\ X0) \Rightarrow ((l4\_algstr\_0\ X0) \wedge (l4\_struct\_0\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.(l4\_algstr\_0\ X0) \Rightarrow ((l3\_struct\_0\ X0) \wedge (l3\_algstr\_0\ X0)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge((\neg v6\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v1\_realset2\ X0)\wedge(l6\_algstr\_0\ X0)))))))))\wedge(m1\_fvaluat1\ X1\ X0))\Rightarrow((\neg v2\_struct\_0\ (k7\_fvaluat1\ X0\ X1))\wedge((\neg v6\_struct\_0\ (k7\_fvaluat1\ X0\ X1))\wedge((v13\_algstr\_0\ (k7\_fvaluat1\ X0\ X1))\wedge((v36\_algstr\_0\ (k7\_fvaluat1\ X0\ X1))\wedge((v3\_group\_1\ (k7\_fvaluat1\ X0\ X1))\wedge((v5\_group\_1\ (k7\_fvaluat1\ X0\ X1))\wedge((v4\_vectsp\_1\ (k7\_fvaluat1\ X0\ X1))\wedge((v5\_vectsp\_1\ (k7\_fvaluat1\ X0\ X1))\wedge((v2\_rlvect\_1\ (k7\_fvaluat1\ X0\ X1))\wedge((v3\_rlvect\_1\ (k7\_fvaluat1\ X0\ X1))\wedge((v4\_rlvect\_1\ (k7\_fvaluat1\ X0\ X1))\wedge(l6\_algstr\_0\ (k7\_fvaluat1\ X0\ X1))))))))))))) \tag{4}$$

Assume the following.

$$\forall X0.(l3\_struct\_0\ X0)\Rightarrow(k5\_struct\_0\ X0 = u3\_struct\_0\ X0) \tag{5}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((\neg v6\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v1\_realset2\ X0)\wedge(l6\_algstr\_0\ X0)))))))))\Rightarrow(\forall X1.(m1\_fvaluat1\ X1\ X0)\Rightarrow((v3\_fvaluat1\ X0)\Rightarrow(\forall X2.((\neg v2\_struct\_0\ X2)\wedge((\neg v6\_struct\_0\ X2)\wedge((v13\_algstr\_0\ X2)\wedge((v36\_algstr\_0\ X2)\wedge((v3\_group\_1\ X2)\wedge((v5\_group\_1\ X2)\wedge((v4\_vectsp\_1\ X2)\wedge((v5\_vectsp\_1\ X2)\wedge((v2\_rlvect\_1\ X2)\wedge((v3\_rlvect\_1\ X2)\wedge((v4\_rlvect\_1\ X2)\wedge(l6\_algstr\_0\ X2)))))))))))\Rightarrow((X2 = k7\_fvaluat1\ X0\ X1)\Leftrightarrow((u1\_struct\_0\ X2 = k6\_fvaluat1\ X0\ X1)\wedge((u1\_algstr\_0\ X2 = k2\_partfun1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0))\ (u1\_struct\_0\ X0)\ (u1\_algstr\_0\ X0)\ (k2\_zfmisc\_1\ (k6\_fvaluat1\ X0\ X1)\ (k6\_fvaluat1\ X0\ X1)))\wedge((u2\_algstr\_0\ X2 = k2\_partfun1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0))\ (u1\_struct\_0\ X0)\ (u2\_algstr\_0\ X0)\ (k2\_zfmisc\_1\ (k6\_fvaluat1\ X0\ X1)\ (k6\_fvaluat1\ X0\ X1)))\wedge((u2\_struct\_0\ X2 = k4\_struct\_0\ X0)\wedge(u3\_struct\_0\ X2 = k5\_struct\_0\ X0))))))))) \tag{6}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((\neg v6\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_group\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v1\_realset2\ X0)\wedge(l6\_algstr\_0\ X0)))))))))\Rightarrow(\forall X1.(m1\_fvaluat1\ X1\ X0)\Rightarrow((v3\_fvaluat1\ X0)\Rightarrow(k5\_struct\_0\ (k7\_fvaluat1\ X0\ X1) = k5\_struct\_0\ X0)))$$