t18_ec_pf_2 (TMVDt8NTvNgZqCEkp3EesLZK82uvy2fAgts)

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Let $v1\_int\_1 : \iota \Rightarrow o$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $v1\_int\_2 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k9\_int\_3 : \iota \Rightarrow \iota$ be given. Let $k6\_int\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_rlvect\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_group\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l6\_algstr\_0 : \iota \Rightarrow o$ be given. Let $k4\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k6\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v33\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v5\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $v5\_group\_1 : \iota \Rightarrow o$ be given. Let $l3\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v2\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $l1\_algstr\_0 : \iota \Rightarrow o$ 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 $v3\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v4\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v4\_vectsp\_1 : \iota \Rightarrow o$ 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 $l2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Let $v7\_struct\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l6\_algstr\_0\ X0)) \Rightarrow ((\forall X1.\ (m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow ((\neg(X1 \neq k4\_struct\_0\ X0) \wedge (\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0)) \Rightarrow (k6\_algstr\_0\ X0\ X4\ X1 \neq k5\_struct\_0\ X0))) \wedge ((k6\_algstr\_0\ X0\ X1\ (k1\_algstr\_0\ X0\ X2\ X3) = k1\_algstr\_0\ X0\ (k6\_algstr\_0\ X0\ X1\ X2)\ (k6\_algstr\_0\ X0\ X1\ X3)) \wedge (k6\_algstr\_0\ X0\ (k1\_algstr\_0\ X0\ X2\ X3)\ X1 = k1\_algstr\_0\ X0\ (k6\_algstr\_0\ X0\ X2\ X1)\ (k6\_algstr\_0\ X0\ X3\ X1)))))))) \Leftrightarrow ((\neg v2\_struct\_0\ X0) \wedge ((v33\_algstr\_0\ X0) \wedge ((v5\_vectsp\_1\ X0) \wedge (l6\_algstr\_0\ X0))))) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_int\_1\ X0)\Rightarrow(\forall X1.(v1\_int\_1\ X1)\Rightarrow(\forall X2.((v7\_ordinal1\ X2)\wedge(v1\_int\_2\ X2))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ (k9\_int\_3\ X2)))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ (k9\_int\_3\ X2)))\Rightarrow(((X3 = k6\_int\_1\ X0\ X2)\wedge(X4 = k6\_int\_1\ X1\ X2))\Rightarrow(k3\_rlvect\_1\ (k9\_int\_3\ X2)\ X3\ X4 = k6\_int\_1\ (k2\_xcmplx\_0\ X0\ X1)\ X2))))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge((v5\_group\_1\ X0)\wedge(l3\_algstr\_0\ X0)))\wedge((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))))\Rightarrow(k8\_group\_1\ X0\ X1\ X2 = k6\_algstr\_0\ X0\ X1\ X2) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v2\_rlvect\_1\ X0)\wedge(l1\_algstr\_0\ X0))\wedge((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))))\Rightarrow(k3\_rlvect\_1\ X0\ X1\ X2 = k1\_algstr\_0\ X0\ X1\ X2) \tag{4}$$

Assume the following.

$$\forall X0.((v7\_ordinal1\ X0)\wedge(v1\_int\_2\ X0))\Rightarrow((\neg v6\_struct\_0\ (k9\_int\_3\ X0))\wedge((v13\_algstr\_0\ (k9\_int\_3\ X0))\wedge((v33\_algstr\_0\ (k9\_int\_3\ X0))\wedge((v3\_group\_1\ (k9\_int\_3\ X0))\wedge((v5\_group\_1\ (k9\_int\_3\ X0))\wedge((v2\_rlvect\_1\ (k9\_int\_3\ X0))\wedge((v3\_rlvect\_1\ (k9\_int\_3\ X0))\wedge((v4\_rlvect\_1\ (k9\_int\_3\ X0))\wedge((v4\_vectsp\_1\ (k9\_int\_3\ X0))\wedge(v5\_vectsp\_1\ (k9\_int\_3\ X0)))))))))) \tag{5}$$

Assume the following.

$$\forall X0.(l6\_algstr\_0\ X0)\Rightarrow((l2\_algstr\_0\ X0)\wedge(l5\_algstr\_0\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.(l5\_algstr\_0\ X0)\Rightarrow((l4\_algstr\_0\ X0)\wedge(l4\_struct\_0\ X0)) \tag{7}$$

Assume the following.

$$\forall X0.(l4\_algstr\_0\ X0)\Rightarrow((l3\_struct\_0\ X0)\wedge(l3\_algstr\_0\ X0)) \tag{8}$$

Assume the following.

$$\forall X0.(l2\_algstr\_0\ X0)\Rightarrow((l2\_struct\_0\ X0)\wedge(l1\_algstr\_0\ X0)) \tag{9}$$

Assume the following.

$$\forall X0.(l1\_algstr\_0\ X0)\Rightarrow(l1\_struct\_0\ X0) \tag{10}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(l6\_algstr\_0\ (k9\_int\_3\ X0)) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((l3\_algstr\_0\ X0)\wedge((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))))\Rightarrow(m1\_subset\_1\ (k6\_algstr\_0\ X0\ X1\ X2)\ (u1\_struct\_0\ X0)) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge((v5\_group\_1\ X0)\wedge(l3\_algstr\_0\ X0)))\wedge((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))))\Rightarrow(k8\_group\_1\ X0\ X1\ X2 = k8\_group\_1\ X0\ X2\ X1) \tag{13}$$

Assume the following.

$$\forall X0.(l4\_struct\_0\ X0)\Rightarrow((\neg v6\_struct\_0\ X0)\Rightarrow(\neg v7\_struct\_0\ X0)) \tag{14}$$

Assume the following.

$$\forall X0.(l1\_struct\_0\ X0)\Rightarrow((\neg v7\_struct\_0\ X0)\Rightarrow(\neg v2\_struct\_0\ X0)) \tag{15}$$

Theorem 1

$$\forall X0.(v1\_int\_1\ X0)\Rightarrow(\forall X1.(v1\_int\_1\ X1)\Rightarrow(\forall X2.((v7\_ordinal1\ X2)\wedge(v1\_int\_2\ X2))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ (k9\_int\_3\ X2)))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ (k9\_int\_3\ X2)))\Rightarrow(\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ (k9\_int\_3\ X2)))\Rightarrow(\forall X6.(m1\_subset\_1\ X6\ (u1\_struct\_0\ (k9\_int\_3\ X2)))\Rightarrow(((X3 = k6\_int\_1\ X0\ X2)\wedge((X4 = k6\_int\_1\ X1\ X2)\wedge(X5 = k6\_int\_1\ (k2\_xcmplx\_0\ X0\ X1)\ X2)))\Rightarrow(k3\_rlvect\_1\ (k9\_int\_3\ X2)\ (k8\_group\_1\ (k9\_int\_3\ X2)\ X3\ X6)\ (k8\_group\_1\ (k9\_int\_3\ X2)\ X4\ X6) = k8\_group\_1\ (k9\_int\_3\ X2)\ X5\ X6)))))))) $$