t2_cc0sp1 (TMGeWSBj5xMH7HCYHYYE1wgw1QwAhJSLzD4)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v13\_algstr\_0 : \iota \Rightarrow o$ 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 $v1\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $v3\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $v2\_clvect\_1 : \iota \Rightarrow o$ be given. Let $v3\_clvect\_1 : \iota \Rightarrow o$ be given. Let $v4\_clvect\_1 : \iota \Rightarrow o$ be given. Let $v2\_cfuncdom : \iota \Rightarrow o$ be given. Let $l1\_cfuncdom : \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v3\_c0sp1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_cc0sp1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $m1\_cc0sp1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $g1\_cfuncdom : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_c0sp1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_c0sp1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_cc0sp1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_c0sp1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_c0sp1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_numbers : \iota$ be given. Let $k4\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k5\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_realset1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_algstr\_0 : \iota \Rightarrow \iota$ be given. Let $u2\_algstr\_0 : \iota \Rightarrow \iota$ be given. Let $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_clvect\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_c0sp1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l6\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l2\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l5\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l1\_clvect\_1 : \iota \Rightarrow o$ be given. Let $v1\_ideal\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_xcmplx\_0 : \iota \Rightarrow o$ be given.

Let $k1\_clvect\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v13\_algstr\_0\ X1) \wedge ((v2\_rlvect\_1\ X1) \wedge ((v3\_rlvect\_1\ X1) \wedge ((v4\_rlvect\_1\ X1) \wedge ((v3\_group\_1\ X1) \wedge ((v5\_group\_1\ X1) \wedge ((v1\_vectsp\_1\ X1) \wedge ((v3\_vectsp\_1\ X1) \wedge ((v2\_clvect\_1\ X1) \wedge ((v3\_clvect\_1\ X1) \wedge ((v4\_clvect\_1\ X1) \wedge ((v2\_cfuncdom\ X1) \wedge (l1\_cfuncdom\ X1))))))))))))) \Rightarrow (\forall X2.((\neg v1\_xboole\_0\ X2) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X1)))) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ X0) \Rightarrow (\forall X4.(m1\_subset\_1\ X4\ X0) \Rightarrow (\forall X5.((v1\_funct\_1\ X5) \wedge ((v1\_funct\_2\ X5\ (k2\_zfmisc\_1\ X0\ X0)\ X0) \wedge (m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)\ X0))))) \Rightarrow (\forall X6.((v1\_funct\_1\ X6) \wedge ((v1\_funct\_2\ X6\ (k2\_zfmisc\_1\ X0\ X0)\ X0) \wedge (m1\_subset\_1\ X6\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)\ X0))))) \Rightarrow (\forall X7.((v1\_funct\_1\ X7) \wedge ((v1\_funct\_2\ X7\ (k2\_zfmisc\_1\ k2\_numbers\ X0)\ X0) \wedge (m1\_subset\_1\ X7\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ k2\_numbers\ X0)\ X0))))) \Rightarrow (((X2 = X0) \wedge ((X3 = k4\_struct\_0\ X1) \wedge ((X4 = k5\_struct\_0\ X1) \wedge ((X5 = k1\_realset1\ (u1\_algstr\_0\ X1)\ X2) \wedge ((X6 = k1\_realset1\ (u2\_algstr\_0\ X1)\ X2) \wedge ((X7 = k2\_partfun1\ (k2\_zfmisc\_1\ k2\_numbers\ (u1\_struct\_0\ X1))\ (u1\_struct\_0\ X1)\ (u1\_clvect\_1\ X1)\ (k2\_zfmisc\_1\ k2\_numbers\ X2)) \wedge (v1\_c0sp1\ X2\ X1))))))) \Rightarrow (m1\_cc0sp1\ (g1\_cfuncdom\ X0\ X6\ X5\ X7\ X4\ X3)\ X1)))))))))) \tag{1}$$

Assume the following.

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

Assume the following.

$$\forall X0.(l1\_cfuncdom\ X0) \Rightarrow ((l6\_algstr\_0\ X0) \wedge (l1\_clvect\_1\ X0)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0) \wedge (l5\_algstr\_0\ X0)) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))) \Rightarrow (m1\_subset\_1\ (k4\_c0sp1\ X0\ X1)\ X1) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0) \wedge ((v13\_algstr\_0\ X0) \wedge ((v3\_rlvect\_1\ X0) \wedge ((v4\_rlvect\_1\ X0) \wedge (l6\_algstr\_0\ X0))))) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))) \Rightarrow (m1\_subset\_1\ (k3\_c0sp1\ X0\ X1)\ X1) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0) \wedge (l5\_algstr\_0\ X0)) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))) \Rightarrow ((v1\_funct\_1\ (k2\_c0sp1\ X0\ X1)) \wedge ((v1\_funct\_2\ (k2\_c0sp1\ X0\ X1)\ (k2\_zfmisc\_1\ X1\ X1)\ X1) \wedge (m1\_subset\_1\ (k2\_c0sp1\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ X1)\ X1))))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge((v5\_group\_1\ X0)\wedge((v1\_vectsp\_1\ X0)\wedge((v3\_vectsp\_1\ X0)\wedge((v2\_clvect\_1\ X0)\wedge((v3\_clvect\_1\ X0)\wedge((v4\_clvect\_1\ X0)\wedge((v2\_cfuncdom\ X0)\wedge(l1\_cfuncdom\ X0))))))))))))\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))))\Rightarrow((v1\_funct\_1\ (k1\_cc0sp1\ X0\ X1))\wedge((v1\_funct\_2\ (k1\_cc0sp1\ X0\ X1)\ (k2\_zfmisc\_1\ k2\_numbers\ X1)\ X1)\wedge(m1\_subset\_1\ (k1\_cc0sp1\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ k2\_numbers\ X1)\ X1))))) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge(l2\_algstr\_0\ X0))\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))))\Rightarrow((v1\_funct\_1\ (k1\_c0sp1\ X0\ X1))\wedge((v1\_funct\_2\ (k1\_c0sp1\ X0\ X1)\ (k2\_zfmisc\_1\ X1\ X1)\ X1)\wedge(m1\_subset\_1\ (k1\_c0sp1\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ X1)\ X1))))) \tag{8}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l5\_algstr\_0\ X0))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow((v3\_c0sp1\ X1\ X0)\Rightarrow((v1\_xboole\_0\ X1)\vee(k4\_c0sp1\ X0\ X1 = k5\_struct\_0\ X0)))) \tag{9}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge(l6\_algstr\_0\ X0)))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow(((v1\_ideal\_1\ X1\ X0)\wedge(v1\_c0sp1\ X1\ X0))\Rightarrow((v1\_xboole\_0\ X1)\vee(k3\_c0sp1\ X0\ X1 = k4\_struct\_0\ X0)))) \tag{10}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l5\_algstr\_0\ X0))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow((v3\_c0sp1\ X1\ X0)\Rightarrow((v1\_xboole\_0\ X1)\vee(k2\_c0sp1\ X0\ X1 = k1\_realset1\ (u2\_algstr\_0\ X0)\ X1)))) \tag{11}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l2\_algstr\_0\ X0))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow((v1\_ideal\_1\ X1\ X0)\Rightarrow((v1\_xboole\_0\ X1)\vee(k1\_c0sp1\ X0\ X1 = k1\_realset1\ (u1\_algstr\_0\ X0)\ X1)))) \tag{12}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge((v5\_group\_1\ X0)\wedge((v1\_vectsp\_1\ X0)\wedge((v3\_vectsp\_1\ X0)\wedge((v2\_clvect\_1\ X0)\wedge((v3\_clvect\_1\ X0)\wedge((v4\_clvect\_1\ X0)\wedge((v2\_cfuncdom\ X0)\wedge(l1\_cfuncdom\ X0))))))))))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow((v1\_cc0sp1\ X1\ X0)\Rightarrow((v1\_xboole\_0\ X1)\vee(k1\_cc0sp1\ X0\ X1 = k2\_partfun1\ (k2\_zfmisc\_1\ k2\_numbers\ (u1\_struct\_0\ X0))\ (u1\_struct\_0\ X0)\ (u1\_clvect\_1\ X0)\ (k2\_zfmisc\_1\ k2\_numbers\ X1))))) \tag{13}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge((v5\_group\_1\ X0)\wedge((v1\_vectsp\_1\ X0)\wedge((v3\_vectsp\_1\ X0)\wedge((v2\_clvect\_1\ X0)\wedge((v3\_clvect\_1\ X0)\wedge((v4\_clvect\_1\ X0)\wedge((v2\_cfuncdom\ X0)\wedge(l1\_cfuncdom\ X0))))))))))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow((v1\_cc0sp1\ X1\ X0)\Leftrightarrow((v1\_ideal\_1\ X1\ X0)\wedge((v1\_c0sp1\ X1\ X0)\wedge(\forall X2.(v1\_xcmplx\_0\ X2)\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow((X3\in X1)\Rightarrow(k1\_clvect\_1\ X0\ X3\ X2\in X1))))))))) \tag{14}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v3\_group\_1\ X0)\wedge((v5\_group\_1\ X0)\wedge((v1\_vectsp\_1\ X0)\wedge((v3\_vectsp\_1\ X0)\wedge((v2\_clvect\_1\ X0)\wedge((v3\_clvect\_1\ X0)\wedge((v4\_clvect\_1\ X0)\wedge((v2\_cfuncdom\ X0)\wedge(l1\_cfuncdom\ X0))))))))))))\Rightarrow(\forall X1.((\neg v1\_xboole\_0\ X1)\wedge((v3\_c0sp1\ X1\ X0)\wedge((v1\_cc0sp1\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))))))\Rightarrow(m1\_cc0sp1\ (g1\_cfuncdom\ X1\ (k2\_c0sp1\ X0\ X1)\ (k1\_c0sp1\ X0\ X1)\ (k1\_cc0sp1\ X0\ X1)\ (k4\_c0sp1\ X0\ X1)\ (k3\_c0sp1\ X0\ X1))\ X0))$$