t10_algstr_2 (TMauoG2WZoaChS5Du2mbMt9DuWpAkaq5wYQ)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l6\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v6\_struct\_0 : \iota \Rightarrow o$ be given. Let $v1\_algstr\_1 : \iota \Rightarrow o$ be given. Let $v4\_algstr\_1 : \iota \Rightarrow o$ be given. Let $v7\_algstr\_1 : \iota \Rightarrow o$ 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 $v4\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $v5\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k5\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k6\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l2\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v13\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v2\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $v1\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $l5\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v7\_struct\_0 : \iota \Rightarrow o$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Let $v1\_zfmisc\_1 : \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $l4\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l4\_struct\_0 : \iota \Rightarrow o$ be given. Let $l2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l3\_struct\_0 : \iota \Rightarrow o$ be given. Let $l1\_algstr\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l2\_algstr\_0\ X0)) \Rightarrow (((\neg v2\_struct\_0\ X0) \wedge ((v13\_algstr\_0\ X0) \wedge ((v3\_rlvect\_1\ X0) \wedge ((v4\_rlvect\_1\ X0) \wedge (l2\_algstr\_0\ X0))))) \Leftrightarrow ((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (k1\_algstr\_0\ X0\ X1\ (k4\_struct\_0\ X0) = X1)) \wedge ((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\exists X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \wedge (k1\_algstr\_0\ X0\ X1\ X2 = k4\_struct\_0\ X0))) \wedge (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow (k1\_algstr\_0\ X0\ (k1\_algstr\_0\ X0\ X1\ X2)\ X3 = k1\_algstr\_0\ X0\ X1\ (k1\_algstr\_0\ X0\ X2\ X3)))))))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l6\_algstr\_0\ X0))\Rightarrow(((\neg v2\_struct\_0\ X0)\wedge((\neg v6\_struct\_0\ X0)\wedge((v1\_algstr\_1\ X0)\wedge((v4\_algstr\_1\ X0)\wedge((v7\_algstr\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v2\_vectsp\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))))\Leftrightarrow((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(k1\_algstr\_0\ X0\ X1\ (k4\_struct\_0\ X0)=X1))\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\exists X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\wedge(k1\_algstr\_0\ X0\ X1\ X2=k4\_struct\_0\ X0)))\wedge((\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(k1\_algstr\_0\ X0\ (k1\_algstr\_0\ X0\ X1\ X2)\ X3=k1\_algstr\_0\ X0\ X1\ (k1\_algstr\_0\ X0\ X2\ X3)))))\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(k1\_algstr\_0\ X0\ X1\ X2=k1\_algstr\_0\ X0\ X2\ X1)))\wedge((k4\_struct\_0\ X0\neq k5\_struct\_0\ X0)\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\ X0\ X1\ (k5\_struct\_0\ X0)=X1))\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\ X0\ (k5\_struct\_0\ X0)\ X1=X1))\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\neg(X1\neq k4\_struct\_0\ X0)\wedge(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\ X0\ X1\ X3\neq X2)))))\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\neg(X1\neq k4\_struct\_0\ X0)\wedge(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\ X0\ X3\ X1\neq X2)))))\wedge((\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((k6\_algstr\_0\ X0\ X1\ X2=k6\_algstr\_0\ X0\ X1\ X3)\Rightarrow((X1=k4\_struct\_0\ X0)\vee(X2=X3))))))\wedge((\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((k6\_algstr\_0\ X0\ X2\ X1=k6\_algstr\_0\ X0\ X3\ X1)\Rightarrow((X1=k4\_struct\_0\ X0)\vee(X2=X3))))))\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\ X0\ X1\ (k4\_struct\_0\ X0)=k4\_struct\_0\ X0))\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\ X0\ (k4\_struct\_0\ X0)\ X1=k4\_struct\_0\ X0))\wedge(\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(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)))))))))))))))))\tag{2}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l6\_algstr\_0\ X0))\Rightarrow(((\neg v2\_struct\_0\ X0)\wedge((\neg v6\_struct\_0\ X0)\wedge((v1\_algstr\_1\ X0)\wedge((v4\_algstr\_1\ X0)\wedge((v7\_algstr\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v1\_vectsp\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))))\Leftrightarrow((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(k1\_algstr\_0\ X0\ X1\ (k4\_struct\_0\ X0)=X1))\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\exists X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\wedge(k1\_algstr\_0\ X0\ X1\ X2=k4\_struct\_0\ X0)))\wedge((\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(k1\_algstr\_0\ X0\ (k1\_algstr\_0\ X0\ X1\ X2)\ X3=k1\_algstr\_0\ X0\ X1\ (k1\_algstr\_0\ X0\ X2\ X3)))))\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(k1\_algstr\_0\ X0\ X1\ X2=k1\_algstr\_0\ X0\ X2\ X1)))\wedge((k4\_struct\_0\ X0\neq k5\_struct\_0\ X0)\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\ X0\ X1\ (k5\_struct\_0\ X0)=X1))\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\ X0\ (k5\_struct\_0\ X0)\ X1=X1))\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\neg(X1\neq k4\_struct\_0\ X0)\wedge(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\ X0\ X1\ X3\neq X2)))))\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\neg(X1\neq k4\_struct\_0\ X0)\wedge(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\ X0\ X3\ X1\neq X2)))))\wedge((\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((k6\_algstr\_0\ X0\ X1\ X2=k6\_algstr\_0\ X0\ X1\ X3)\Rightarrow((X1=k4\_struct\_0\ X0)\vee(X2=X3)))))))\wedge((\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((k6\_algstr\_0\ X0\ X2\ X1=k6\_algstr\_0\ X0\ X3\ X1)\Rightarrow((X1=k4\_struct\_0\ X0)\vee(X2=X3)))))))\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\ X0\ X1\ (k4\_struct\_0\ X0)=k4\_struct\_0\ X0))\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\ X0\ (k4\_struct\_0\ X0)\ X1=k4\_struct\_0\ X0))\wedge(\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(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)))))))))))))))\tag{3}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l5\_algstr\_0\ X0))\Rightarrow((v7\_algstr\_1\ X0)\Leftrightarrow((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\neg(X1{\neq}k4\_struct\_0\ X0)\wedge(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\ X0\ X1\ X3{\neq}X2)))))\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\neg(X1{\neq}k4\_struct\_0\ X0)\wedge(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\ X0\ X3\ X1{\neq}X2)))))\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow((k6\_algstr\_0\ X0\ X1\ X2 = k6\_algstr\_0\ X0\ X1\ X3)\Rightarrow((X1 = k4\_struct\_0\ X0)\vee(X2 = X3))))))\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow((k6\_algstr\_0\ X0\ X2\ X1 = k6\_algstr\_0\ X0\ X3\ X1)\Rightarrow((X1 = k4\_struct\_0\ X0)\vee(X2 = X3))))))\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\ X0\ X1\ (k4\_struct\_0\ X0) = k4\_struct\_0\ X0))\wedge(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\ X0\ (k4\_struct\_0\ X0)\ X1 = k4\_struct\_0\ X0)))))))) \tag{4}$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0\ X0)\wedge(l1\_struct\_0\ X0))\Rightarrow(\neg v1\_zfmisc\_1\ (u1\_struct\_0\ X0)) \tag{5}$$

Assume the following.

$$\forall X0.((v2\_struct\_0\ X0)\wedge(l1\_struct\_0\ X0))\Rightarrow(v1\_xboole\_0\ (u1\_struct\_0\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.(l6\_algstr\_0\ X0)\Rightarrow((l2\_algstr\_0\ X0)\wedge(l5\_algstr\_0\ X0)) \tag{7}$$

Assume the following.

$$\forall X0.(l5\_algstr\_0\ X0)\Rightarrow((l4\_algstr\_0\ X0)\wedge(l4\_struct\_0\ X0)) \tag{8}$$

Assume the following.

$$\forall X0.(l4\_struct\_0\ X0)\Rightarrow((l2\_struct\_0\ X0)\wedge(l3\_struct\_0\ X0)) \tag{9}$$

Assume the following.

$$\forall X0.(l2\_struct\_0\ X0)\Rightarrow(l1\_struct\_0\ X0) \tag{10}$$

Assume the following.

$$\forall X0.(l2\_algstr\_0\ X0)\Rightarrow((l2\_struct\_0\ X0)\wedge(l1\_algstr\_0\ X0)) \tag{11}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l6\_algstr\_0\ X0))\Rightarrow((v5\_vectsp\_1\ X0)\Leftrightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow((k6\_algstr\_0\ X0\ X1\ (k1\_algstr\_0\ X0\ X2\ X3) = k1\_algstr\_0\ X0\ (k6\_algstr\_0\ X0\ X1\ X2)\ (k6\_algstr\_0\ X0\ X1\ X3))\wedge(k6\_algstr\_0\ X0\ (k1\_algstr\_0\ X0\ X2\ X3)\ X1 = k1\_algstr\_0\ X0\ (k6\_algstr\_0\ X0\ X2\ X1)\ (k6\_algstr\_0\ X0\ X3\ X1)))))))) \tag{12}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l4\_algstr\_0\ X0))\Rightarrow((v4\_vectsp\_1\ X0)\Leftrightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow((k6\_algstr\_0\ X0\ X1\ (k5\_struct\_0\ X0) = X1)\wedge(k6\_algstr\_0\ X0\ (k5\_struct\_0\ X0)\ X1 = X1)))) \tag{13}$$

Assume the following.

$$\forall X0.(l2\_algstr\_0\ X0)\Rightarrow((v4\_rlvect\_1\ X0)\Leftrightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(k1\_algstr\_0\ X0\ X1\ (k4\_struct\_0\ X0) = X1))) \tag{14}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l6\_algstr\_0\ X0))\Rightarrow((v2\_vectsp\_1\ X0)\Leftrightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\ X0\ (k1\_algstr\_0\ X0\ X2\ X3)\ X1 = k1\_algstr\_0\ X0\ (k6\_algstr\_0\ X0\ X2\ X1)\ (k6\_algstr\_0\ X0\ X3\ X1)))))) \tag{15}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l6\_algstr\_0\ X0))\Rightarrow((v1\_vectsp\_1\ X0)\Leftrightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\ X0\ X1\ (k1\_algstr\_0\ X0\ X2\ X3) = k1\_algstr\_0\ X0\ (k6\_algstr\_0\ X0\ X1\ X2)\ (k6\_algstr\_0\ X0\ X1\ X3)))))) \tag{16}$$

Assume the following.

$$\forall X0.(l1\_algstr\_0\ X0)\Rightarrow((v2\_rlvect\_1\ X0)\Leftrightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(k1\_algstr\_0\ X0\ X1\ X2 = k1\_algstr\_0\ X0\ X2\ X1)))) \tag{17}$$

Assume the following.

$$\forall X0.(l4\_struct\_0\ X0)\Rightarrow((\neg v6\_struct\_0\ X0)\Rightarrow(\neg v7\_struct\_0\ X0)) \tag{18}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0) \Rightarrow (v1\_zfmisc\_1\ X0) \tag{19}$$

Assume the following.

$$\begin{array}{c}\forall X0.(l6\_algstr\_0\ X0) \Rightarrow (((\neg v2\_struct\_0\ X0) \wedge (v5\_vectsp\_1 \\ X0)) \Rightarrow ((\neg v2\_struct\_0\ X0) \wedge ((v1\_vectsp\_1\ X0) \wedge (v2\_vectsp\_1\ X0))))\end{array} \tag{20}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l6\_algstr\_0\ X0))\Rightarrow(((\neg v2\_struct\_0\ X0)\wedge((\neg v6\_struct\_0\ X0)\wedge((v1\_algstr\_1\ X0)\wedge((v4\_algstr\_1\ X0)\wedge((v7\_algstr\_1\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v4\_vectsp\_1\ X0)\wedge((v5\_vectsp\_1\ X0)\wedge(l6\_algstr\_0\ X0))))))))))\Leftrightarrow((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(k1\_algstr\_0\ X0\ X1\ (k4\_struct\_0\ X0)=X1))\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\exists X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\wedge(k1\_algstr\_0\ X0\ X1\ X2=k4\_struct\_0\ X0)))\wedge((\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(k1\_algstr\_0\ X0\ (k1\_algstr\_0\ X0\ X1\ X2)\ X3=k1\_algstr\_0\ X0\ X1\ (k1\_algstr\_0\ X0\ X2\ X3)))))\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(k1\_algstr\_0\ X0\ X1\ X2=k1\_algstr\_0\ X0\ X2\ X1)))\wedge((k4\_struct\_0\ X0\neq k5\_struct\_0\ X0)\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\ X0\ X1\ (k5\_struct\_0\ X0)=X1))\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\ X0\ (k5\_struct\_0\ X0)\ X1=X1))\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\neg(X1\neq k4\_struct\_0\ X0)\wedge(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\ X0\ X1\ X3\neq X2)))))\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\neg(X1\neq k4\_struct\_0\ X0)\wedge(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\ X0\ X3\ X1\neq X2)))))\wedge((\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((k6\_algstr\_0\ X0\ X1\ X2=k6\_algstr\_0\ X0\ X1\ X3)\Rightarrow((X1=k4\_struct\_0\ X0)\vee(X2=X3)))))))\wedge((\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((k6\_algstr\_0\ X0\ X2\ X1=k6\_algstr\_0\ X0\ X3\ X1)\Rightarrow((X1=k4\_struct\_0\ X0)\vee(X2=X3)))))))\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\ X0\ X1\ (k4\_struct\_0\ X0)=k4\_struct\_0\ X0))\wedge((\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(k6\_algstr\_0\ X0\ (k4\_struct\_0\ X0)\ X1=k4\_struct\_0\ X0))\wedge((\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(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(\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(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))))))))))))))))))$$