# t33_algstr_4 (TMdyMgACuaad5SzZQ8sPVg3tQJxRx5YyxYg)

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Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k14\_algstr\_4 : \iota \Rightarrow \iota$ be given. Let $k15\_algstr\_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k2\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $v1\_xcmplx\_0 : \iota \Rightarrow o$ be given. Let $k6\_numbers : \iota$ be given. Let $l3\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0) \Rightarrow (X0 = k1\_xboole\_0) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ (k14\_algstr\_4\ X0))) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ (k14\_algstr\_4\ X0))) \Rightarrow ((\neg v1\_xboole\_0\ X0) \Rightarrow (k6\_algstr\_0\ (k14\_algstr\_4\ X0)\ X1\ X2 = k4\_tarski\ (k4\_tarski\ (k1\_xtuple\_0\ X1)\ (k1\_xtuple\_0\ X2))\ (k2\_xtuple\_0\ X1))\ (k2\_xcmplx\_0\ (k15\_algstr\_4\ X0\ X1)\ (k15\_algstr\_4\ X0\ X2))))) \tag{2}$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0\ X0) \Rightarrow (k2\_xcmplx\_0\ X0\ k6\_numbers = X0) \tag{3}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.k2\_xtuple\_0\ (k4\_tarski\ X0\ X1) = X1 \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((l3\_algstr\_0\ X0) \wedge ((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \wedge (m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)))) \Rightarrow (m1\_subset\_1\ (k6\_algstr\_0\ X0\ X1\ X2)\ (u1\_struct\_0\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.l3\_algstr\_0\ (k14\_algstr\_4\ X0) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ (k14\_algstr\_4\ X0)))\Rightarrow(((\neg v1\_xboole\_0\ X0)\Rightarrow(k15\_algstr\_4\ X0\ X1 = k2\_xtuple\_0\ X1))\wedge((v1\_xboole\_0\ X0)\Rightarrow(k15\_algstr\_4\ X0\ X1 = k6\_numbers))) \tag{8}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0)\Rightarrow(v7\_ordinal1\ X0) \tag{9}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(v1\_xcmplx\_0\ X0) \tag{10}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(v1\_xreal\_0\ X0) \tag{11}$$

**Theorem 1**

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ (k14\_algstr\_4\ X0)))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ (k14\_algstr\_4\ X0)))\Rightarrow(k15\_algstr\_4\ X0\ (k6\_algstr\_0\ (k14\_algstr\_4\ X0)\ X1\ X2) = k2\_xcmplx\_0\ (k15\_algstr\_4\ X0\ X1)\ (k15\_algstr\_4\ X0\ X2)))$$