

# l11\_algstr\_3

## (TMJYNi52vMkcsdqu5So39bk9gdthAsEw2La)

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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  $k3\_algstr\_3 : \iota$  be given. Let  $k1\_algstr\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k7\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  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  $k3\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $g1\_algstr\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_membered : \iota \Rightarrow o$  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  $l1\_algstr\_3 : \iota \Rightarrow o$  be given. Let  $v1\_algstr\_3 : \iota \Rightarrow o$  be given. Let  $k2\_algstr\_3 : \iota$  be given. Let  $u2\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_membered : \iota \Rightarrow o$  be given. Let  $u3\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $u1\_algstr\_3 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k3\_xcmplx\_0 np\_1 X0 = X0) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k3\_xcmplx\_0 X0 k6\_numbers = k6\_numbers) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 k3\_algstr\_3)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (u1\_struct\_0 k3\_algstr\_3)) \Rightarrow (\forall X2.(m1\_subset\_1 \\ & X2 (u1\_struct\_0 k3\_algstr\_3)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 k1\_numbers) \Rightarrow \\ & (\forall X4.(m1\_subset\_1 X4 k1\_numbers) \Rightarrow (\forall X5.(m1\_subset\_1 \\ & X5 k1\_numbers) \Rightarrow (((X0 = X3) \wedge ((X1 = X4) \wedge (X2 = X5))) \Rightarrow (k1\_algstr\_3 \\ & k3\_algstr\_3 X0 X1 X2 = k7\_real\_1 (k8\_real\_1 X3 X4 X5))))))))) \end{aligned} \quad (3)$$

Assume the following.

$$m1\_subset\_1 k1\_xboole\_0 k4\_ordinal1 \quad (4)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k2\_xcmplx\_0 X0 \ k6\_numbers = X0) \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2\_xreal\_0 \ np\_1) \wedge (m2\_subset\_1 \ np\_1 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_1 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_1 \ k1\_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 \ X0 \ k1\_numbers) \wedge (v1\_xreal\_0 \ X1)) \Rightarrow (k8\_real\_1 \ X0 \ X1 = k3\_xcmplx\_0 \ X0 \ X1) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 \ X0 \ k1\_numbers) \wedge (v1\_xreal\_0 \ X1)) \Rightarrow (k7\_real\_1 \ X0 \ X1 = k2\_xcmplx\_0 \ X0 \ X1) \quad (8)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (9)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((m1\_subset\_1 \ X1 \\ & X0) \wedge ((m1\_subset\_1 \ X2 \ X0) \wedge ((v1\_funct\_1 \ X3) \wedge ((v1\_funct\_2 \ X3 \ (k3\_zfmisc\_1 \\ & X0 \ X0 \ X0) \wedge (m1\_subset\_1 \ X3 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ (k3\_zfmisc\_1 \\ & X0 \ X0 \ X0) \ X0)))))) \Rightarrow (\forall X4.\forall X5.\forall X6.\forall X7. \\ & (g1\_algstr\_3 \ X0 \ X1 \ X2 \ X3 = g1\_algstr\_3 \ X4 \ X5 \ X6 \ X7) \Rightarrow ((X0 = X4) \wedge ((X1 = \\ & X5) \wedge ((X2 = X6) \wedge (X3 = X7)))))) \end{aligned} \quad (11)$$

Assume the following.

$$v3\_membered \ k1\_numbers \quad (12)$$

Assume the following.

$$\forall X0.(l4\_struct\_0 \ X0) \Rightarrow ((l2\_struct\_0 \ X0) \wedge (l3\_struct\_0 \ X0)) \quad (13)$$

Assume the following.

$$\forall X0.(l1\_algstr\_3 \ X0) \Rightarrow (l4\_struct\_0 \ X0) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 \ X0 \ k1\_numbers) \wedge (v1\_xreal\_0 \ X1)) \Rightarrow (m1\_subset\_1 \ (k8\_real\_1 \ X0 \ X1) \ k1\_numbers) \quad (15)$$

Assume the following.

$$m1\_subset\_1 \ k5\_numbers \ (k1\_zfmisc\_1 \ k1\_numbers) \quad (16)$$

Assume the following.

$$(v1\_algstr\_3 \ k3\_algstr\_3) \wedge (l1\_algstr\_3 \ k3\_algstr\_3) \quad (17)$$

Assume the following.

$$\begin{aligned} & (v1\_funct\_1 \ k2\_algstr\_3) \wedge ((v1\_funct\_2 \ k2\_algstr\_3 \ (k3\_zfmisc\_1 \\ & k1\_numbers \ k1\_numbers \ k1\_numbers) \ k1\_numbers) \wedge (m1\_subset\_1 \\ & k2\_algstr\_3 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ (k3\_zfmisc\_1 \ k1\_numbers \\ & k1\_numbers \ k1\_numbers) \ k1\_numbers)))) \quad (18) \end{aligned}$$

Assume the following.

$$\forall X0. (l2\_struct\_0 \ X0) \Rightarrow (k4\_struct\_0 \ X0 = u2\_struct\_0 \ X0) \quad (19)$$

Assume the following.

$$k3\_algstr\_3 = g1\_algstr\_3 \ k1\_numbers \ k6\_numbers \ np\_1 \ k2\_algstr\_3 \quad (20)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_xcmplx\_0 \ X0) \wedge (v1\_xcmplx\_0 \ X1)) \Rightarrow (k3\_xcmplx\_0 \ X0 \ X1 = k3\_xcmplx\_0 \ X1 \ X0) \quad (21)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_xcmplx\_0 \ X0) \wedge (v1\_xcmplx\_0 \ X1)) \Rightarrow (k2\_xcmplx\_0 \ X0 \ X1 = k2\_xcmplx\_0 \ X1 \ X0) \quad (22)$$

Assume the following.

$$\forall X0. (m1\_subset\_1 \ X0 \ (k1\_zfmisc\_1 \ k1\_numbers)) \Rightarrow (v3\_membered \ X0) \quad (23)$$

Assume the following.

$$\forall X0. (v3\_membered \ X0) \Rightarrow (v1\_membered \ X0) \quad (24)$$

Assume the following.

$$\forall X0. (v3\_membered \ X0) \Rightarrow (\forall X1. (m1\_subset\_1 \ X1 \ X0) \Rightarrow (v1\_xreal\_0 \ X1)) \quad (25)$$

Assume the following.

$$\forall X0. (v1\_membered \ X0) \Rightarrow (\forall X1. (m1\_subset\_1 \ X1 \ X0) \Rightarrow (v1\_xcmplx\_0 \ X1)) \quad (26)$$

Assume the following.

$$\forall X0. (l1\_algstr\_3 \ X0) \Rightarrow ((v1\_algstr\_3 \ X0) \Rightarrow (X0 = g1\_algstr\_3 \ (u1\_struct\_0 \ X0) \ (u2\_struct\_0 \ X0) \ (u3\_struct\_0 \ X0) \ (u1\_algstr\_3 \ X0))) \quad (27)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 k3\_algstr\_3)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (u1\_struct\_0 k3\_algstr\_3)) \Rightarrow (k1\_algstr\_3 k3\_algstr\_3 \\ & (k4\_struct\_0 k3\_algstr\_3) X0 X1 = X1)) \end{aligned}$$