

# l37\_algstr\_1

(TMK6SPmmfG8pobKnCnSMaSFY5ucg8hpVfBb)

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Let  $k6\_numbers : \iota$  be given. Let  $k4\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_algstr\_1 : \iota$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_0 : \iota$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_xcmplx\_0 : \iota \Rightarrow \iota$  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  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $g5\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  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  $l2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l3\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v29\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $k35\_binop\_2 : \iota$  be given. Let  $u2\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $u2\_algstr\_0 : \iota \Rightarrow \iota$  be given. Let  $u3\_struct\_0 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 \ np\_1) \wedge (m2\_subset\_1 \ np\_1 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_1 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_1 \ k1\_numbers)) \end{aligned} \quad (1)$$

Assume the following.

$$(m2\_subset\_1 \ np\_0 \ k1\_numbers \ k5\_numbers) \wedge ((m1\_subset\_1 \ np\_0 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_0 \ k1\_numbers)) \quad (2)$$

Assume the following.

$$k2\_xcmplx\_0 \ np\_1 \ (k4\_xcmplx\_0 \ np\_1) = np\_0 \quad (3)$$

Assume the following.

$$k2\_xcmplx\_0 \ np\_1 \ (k4\_xcmplx\_0 \ np\_1) = k6\_numbers \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((v1\_funct\_1 \ X1) \wedge \\ & ((v1\_funct\_2 \ X1 \ (k2\_zfmisc\_1 \ X0 \ X0) \ X0) \wedge (m1\_subset\_1 \ X1 \ (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 \ (k2\_zfmisc\_1 \ X0 \ X0) \ X0)))))) \wedge ((m1\_subset\_1 \ X2 \ X0) \wedge \\ & (m1\_subset\_1 \ X3 \ X0))) \Rightarrow (\forall X4. \forall X5. \forall X6. \forall X7. \\ & (g5\_algstr\_0 \ X0 \ X1 \ X2 \ X3 = g5\_algstr\_0 \ X4 \ X5 \ X6 \ X7) \Rightarrow ((X0 = X4) \wedge ((X1 = \\ & X5) \wedge ((X2 = X6) \wedge (X3 = X7)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(l5\_algstr\_0 X0) \Rightarrow ((l4\_algstr\_0 X0) \wedge (l4\_struct\_0 X0)) \quad (6)$$

Assume the following.

$$\forall X0.(l4\_struct\_0 X0) \Rightarrow ((l2\_struct\_0 X0) \wedge (l3\_struct\_0 X0)) \quad (7)$$

Assume the following.

$$(v29\_algstr\_0 k3\_algstr\_1) \wedge (l5\_algstr\_0 k3\_algstr\_1) \quad (8)$$

Assume the following.

$$\begin{aligned} & (v1\_funct\_1 k35\_binop\_2) \wedge ((v1\_funct\_2 k35\_binop\_2 (k2\_zfmisc\_1 \\ & k1\_numbers k1\_numbers) k1\_numbers) \wedge (m1\_subset\_1 k35\_binop\_2 \\ & (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers) \\ & k1\_numbers)))) \quad (9) \end{aligned}$$

Assume the following.

$$k3\_algstr\_1 = g5\_algstr\_0 k1\_numbers k35\_binop\_2 k6\_numbers np\_1 \quad (10)$$

Assume the following.

$$\forall X0.(l2\_struct\_0 X0) \Rightarrow (k4\_struct\_0 X0 = u2\_struct\_0 X0) \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l5\_algstr\_0 X0) \Rightarrow ((v29\_algstr\_0 X0) \Rightarrow (X0 = g5\_algstr\_0 \\ & (u1\_struct\_0 X0) (u2\_algstr\_0 X0) (u2\_struct\_0 X0) (u3\_struct\_0 \\ & X0))) \quad (12) \end{aligned}$$

**Theorem 1**  $k6\_numbers = k4\_struct\_0 k3\_algstr\_1$ .