

# l18\_algstr\_2

(TMQN<sub>o</sub>ATHTF5aPL9ixAcLT1SaA5Lesmoou4b)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l6\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k6\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  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  $l3\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l3\_algstr\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(l6\_algstr\_0 X0) \Rightarrow ((l2\_algstr\_0 X0) \wedge (l5\_algstr\_0 X0)) \quad (1)$$

Assume the following.

$$\forall X0.(l5\_algstr\_0 X0) \Rightarrow ((l4\_algstr\_0 X0) \wedge (l4\_struct\_0 X0)) \quad (2)$$

Assume the following.

$$\forall X0.(l4\_algstr\_0 X0) \Rightarrow ((l3\_struct\_0 X0) \wedge (l3\_algstr\_0 X0)) \quad (3)$$

Assume the following.

$$\forall X0.(l3\_struct\_0 X0) \Rightarrow (m1\_subset\_1 (k5\_struct\_0 X0) (u1\_struct\_0 X0)) \quad (4)$$

## Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l6\_algstr\_0 X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 \\ & (u1\_struct\_0 X0)) \Rightarrow (((\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\ & X0)) \Rightarrow (k6\_algstr\_0 X0 X3 (k5\_struct\_0 X0) = X3)) \wedge ((\forall X3.( \\ & m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (\neg(X3 \neq k4\_struct\_0 X0) \wedge (\forall X4. \\ & (m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow (k6\_algstr\_0 X0 X3 X4 \neq k5\_struct\_0 \\ & X0)))))) \wedge ((\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (\forall X4. \\ & (m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow (\forall X5.(m1\_subset\_1 X5 \\ & (u1\_struct\_0 X0)) \Rightarrow (k6\_algstr\_0 X0 (k6\_algstr\_0 X0 X3 X4) X5 = k6\_algstr\_0 \\ & X0 X3 (k6\_algstr\_0 X0 X4 X5)))))) \wedge ((\forall X3.(m1\_subset\_1 X3 ( \\ & u1\_struct\_0 X0)) \Rightarrow (k6\_algstr\_0 X0 X3 (k4\_struct\_0 X0) = k4\_struct\_0 \\ & X0)) \wedge (k6\_algstr\_0 X0 X1 X2 = k5\_struct\_0 X0)))))) \Rightarrow ((k4\_struct\_0 \\ & X0 = k5\_struct\_0 X0) \vee (k6\_algstr\_0 X0 X2 X1 = k5\_struct\_0 X0)))) \end{aligned}$$