

## l29\_algstr\_1

(TMF5hZzWZFDV2WdiCiGroJecfKYa83iUrQ6)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l4\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k6\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_struct\_0 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l4\_algstr\_0 X0)) \Rightarrow (\forall X1. \\
 & (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow ((\forall X2. (m1\_subset\_1 \\
 & X2 (u1\_struct\_0 X0)) \Rightarrow (k6\_algstr\_0 X0 X2 (k5\_struct\_0 X0) = X2)) \wedge \\
 & ((\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\exists X3. ( \\
 & m1\_subset\_1 X3 (u1\_struct\_0 X0)) \wedge (k6\_algstr\_0 X0 X2 X3 = k5\_struct\_0 \\
 & X0))) \wedge (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. \\
 & (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (\forall X4. (m1\_subset\_1 X4 \\
 & (u1\_struct\_0 X0)) \Rightarrow (k6\_algstr\_0 X0 (k6\_algstr\_0 X0 X2 X3) X4 = k6\_algstr\_0 \\
 & X0 X2 (k6\_algstr\_0 X0 X3 X4)))))) \Rightarrow (k6\_algstr\_0 X0 (k5\_struct\_0 \\
 & X0) X1 = k6\_algstr\_0 X0 X1 (k5\_struct\_0 X0)))
 \end{aligned} \tag{1}$$

### Theorem 1

$$\begin{aligned}
 & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l4\_algstr\_0 X0)) \Rightarrow (((\forall X1. \\
 & (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (k6\_algstr\_0 X0 X1 (k5\_struct\_0 \\
 & X0) = X1)) \wedge (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\exists X2. \\
 & (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \wedge (k6\_algstr\_0 X0 X1 X2 = k5\_struct\_0 \\
 & X0))) \wedge (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\
 & (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. (m1\_subset\_1 X3 \\
 & (u1\_struct\_0 X0)) \Rightarrow (k6\_algstr\_0 X0 (k6\_algstr\_0 X0 X1 X2) X3 = k6\_algstr\_0 \\
 & X0 X1 (k6\_algstr\_0 X0 X2 X3)))))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 \\
 & (u1\_struct\_0 X0)) \Rightarrow (\exists X2. (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \wedge \\
 & (k6\_algstr\_0 X0 X2 X1 = k5\_struct\_0 X0)))
 \end{aligned}$$