

## l20\_algstr\_2

(TMF3Cuq6VZqFamkw2aCmPm9UkKMbECmVCjS)

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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  $k6\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_struct\_0 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l6\_algstr\_0 X0)) \Rightarrow (\forall X1. \\
 & (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 \\
 & (u1\_struct\_0 X0)) \Rightarrow ((\forall X3. (m1\_subset\_1 X3 (u1\_struct\_0 \\
 & X0)) \Rightarrow (k6\_algstr\_0 X0 X3 (k5\_struct\_0 X0) = X3)) \wedge (\forall X3. ( \\
 & m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (\neg (X3 \neq k4\_struct\_0 X0) \wedge (\forall X4. \\
 & (m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow (k6\_algstr\_0 X0 X3 X4 \neq k5\_struct\_0 \\
 & X0)))) \wedge (\forall X3. (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (\forall X4. \\
 & (m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow (\forall X5. (m1\_subset\_1 X5 \\
 & (u1\_struct\_0 X0)) \Rightarrow (k6\_algstr\_0 X0 (k6\_algstr\_0 X0 X3 X4) X5 = k6\_algstr\_0 \\
 & X0 X3 (k6\_algstr\_0 X0 X4 X5)))) \wedge (\forall X3. (m1\_subset\_1 X3 ( \\
 & u1\_struct\_0 X0)) \Rightarrow (k6\_algstr\_0 X0 X3 (k4\_struct\_0 X0) = k4\_struct\_0 \\
 & X0)) \wedge (k6\_algstr\_0 X0 X1 X2 = k5\_struct\_0 X0)))) \Rightarrow ((k4\_struct\_0 \\
 & X0 = k5\_struct\_0 X0) \vee (k6\_algstr\_0 X0 X2 X1 = k5\_struct\_0 X0))))) \\
 & \tag{1}
 \end{aligned}$$

### Theorem 1

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