

# t3\_algstr\_2 (TMRd- jFE1JqTNJjSZXqbKbRG3qiTcACkAE91)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v5\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v3\_algstr\_1 : \iota \Rightarrow o$  be given. Let  $v2\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_algstr\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $l2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $k1\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_struct\_0 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(l2\_algstr\_0 X0) \Rightarrow ((l2\_struct\_0 X0) \wedge (l1\_algstr\_0 X0)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge ((v5\_algstr\_0 X0) \wedge \\ & ((v3\_algstr\_1 X0) \wedge (l2\_algstr\_0 X0)))) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 \\ & X0))) \Rightarrow (m1\_subset\_1 (k1\_algstr\_2 X0 X1) (u1\_struct\_0 X0)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1\_algstr\_0 X0) \Rightarrow ((v2\_rlvect\_1 X0) \Leftrightarrow (\forall X1.( \\ & m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 \\ & (u1\_struct\_0 X0)) \Rightarrow (k1\_algstr\_0 X0 X1 X2 = k1\_algstr\_0 X0 X2 X1)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v5\_algstr\_0 X0) \wedge ((v3\_algstr\_1 \\ & X0) \wedge (l2\_algstr\_0 X0)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\ & X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow ((X2 = k1\_algstr\_2 \\ & X0 X1) \Leftrightarrow (k1\_algstr\_0 X0 X1 X2 = k4\_struct\_0 X0)))) \end{aligned} \quad (4)$$

## Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v5\_algstr\_0 X0) \wedge ((v3\_algstr\_1 \\ & X0) \wedge ((v2\_rlvect\_1 X0) \wedge (l2\_algstr\_0 X0)))) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 (u1\_struct\_0 X0)) \Rightarrow (k1\_algstr\_2 X0 (k1\_algstr\_2 X0 X1) = X1)) \end{aligned}$$