

t10\_algstr\_4 (TM-  
JEUhLnrXSifH5YAtTpRUZPSpPtvYTRe87)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l3\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v2\_algstr\_4 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_group\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. ((\neg v2\_struct\_0 X1) \wedge (l3\_algstr\_0 X1)) \Rightarrow \\
 & (\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X1))) \Rightarrow \\
 & (\forall X3. (m1\_subset\_1 X3 (k1\_zfmisc\_1 (u1\_struct\_0 X1))) \Rightarrow \\
 & ((X0 \in k2\_group\_2 X1 X2 X3) \Leftrightarrow (\exists X4. (m1\_subset\_1 X4 (u1\_struct\_0 \\
 & X1)) \wedge (\exists X5. (m1\_subset\_1 X5 (u1\_struct\_0 X1)) \wedge ((X0 = k6\_algstr\_0 \\
 & X1 X4 X5) \wedge ((X4 \in X2) \wedge (X5 \in X3))))))) \tag{1}
 \end{aligned}$$

Assume the following.

$$\forall X0. \forall X1. (r1\_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \tag{2}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. (l3\_algstr\_0 X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\
 & (u1\_struct\_0 X0))) \Rightarrow ((v2\_algstr\_4 X1 X0) \Leftrightarrow (\forall X2. (m1\_subset\_1 \\
 & X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. (m1\_subset\_1 X3 (u1\_struct\_0 \\
 & X0)) \Rightarrow (((X2 \in X1) \wedge (X3 \in X1)) \Rightarrow (k6\_algstr\_0 X0 X2 X3 \in X1)))))) \tag{3}
 \end{aligned}$$

**Theorem 1**

$$\begin{aligned}
 & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l3\_algstr\_0 X0)) \Rightarrow (\forall X1. \\
 & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow ((v2\_algstr\_4 \\
 & X1 X0) \Leftrightarrow (r1\_tarski (k2\_group\_2 X0 X1 X1) X1)))
 \end{aligned}$$