

t10\_unialg\_2  
(TMZ3VDY3z6HxV9zFAMFRp9xpyhM9ixa23EA)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_unialg\_1 : \iota \Rightarrow o$  be given. Let  $v3\_unialg\_1 : \iota \Rightarrow o$  be given. Let  $v4\_unialg\_1 : \iota \Rightarrow o$  be given. Let  $l1\_unialg\_1 : \iota \Rightarrow o$  be given. Let  $v1\_unialg\_1 : \iota \Rightarrow o$  be given. Let  $m1\_unialg\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $u1\_unialg\_1 : \iota \Rightarrow \iota$  be given. Let  $k3\_unialg\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_unialg\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $g1\_unialg\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_unialg\_1 X0) \wedge ((v3\_unialg\_1 X0) \wedge ((v4\_unialg\_1 X0) \wedge (l1\_unialg\_1 X0)))))) \Rightarrow (m1\_unialg\_2 X0 X0) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 X1) \Leftrightarrow (r1\_tarski X0 X1) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (r1\_tarski X0 X1) \Rightarrow (k3\_xboole\_0 X0 X1 = X0) \quad (3)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_struct\_0 X0)) \Rightarrow (\neg v1\_xboole\_0 (u1\_struct\_0 X0)) \quad (4)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_unialg\_1 X0) \wedge ((v3\_unialg\_1 X0) \wedge ((v4\_unialg\_1 X0) \wedge (l1\_unialg\_1 X0)))))) \Rightarrow (\forall X1. (m1\_unialg\_2 X1 X0) \Rightarrow ((\neg v2\_struct\_0 X1) \wedge ((v2\_unialg\_1 X1) \wedge ((v3\_unialg\_1 X1) \wedge ((v4\_unialg\_1 X1) \wedge (l1\_unialg\_1 X1)))))) \quad (5)$$

Assume the following.

$$\forall X0.(l1\_unialg\_1 X0) \Rightarrow (l1\_struct\_0 X0) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_unialg\_1 X0) \wedge ((v3\_unialg\_1 \\ X0) \wedge ((v4\_unialg\_1 X0) \wedge (l1\_unialg\_1 X0)))))) \Rightarrow (\forall X1.((\neg \\ v2\_struct\_0 X1) \wedge ((v2\_unialg\_1 X1) \wedge ((v3\_unialg\_1 X1) \wedge ((v4\_unialg\_1 \\ X1) \wedge (l1\_unialg\_1 X1)))))) \Rightarrow ((m1\_unialg\_2 X1 X0) \Leftrightarrow ((m1\_subset\_1 \\ (u1\_struct\_0 X1) (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \wedge (\forall X2. \\ ((\neg v1\_xboole\_0 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 \\ X0)))) \Rightarrow ((X2 = u1\_struct\_0 X1) \Rightarrow ((u1\_unialg\_1 X1 = k3\_unialg\_2 X0 \\ X2) \wedge (v1\_unialg\_2 X2 X0))))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.k3\_xboole\_0 X0 X1 = k3\_xboole\_0 X1 X0 \quad (8)$$

Assume the following.

$$\forall X0.(l1\_unialg\_1 X0) \Rightarrow ((v1\_unialg\_1 X0) \Rightarrow (X0 = g1\_unialg\_1 \\ (u1\_struct\_0 X0) (u1\_unialg\_1 X0))) \quad (9)$$

**Theorem 1**

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_unialg\_1 X0) \wedge ((v3\_unialg\_1 \\ X0) \wedge ((v4\_unialg\_1 X0) \wedge (l1\_unialg\_1 X0)))))) \Rightarrow (\forall X1.((\neg \\ v2\_struct\_0 X1) \wedge ((v2\_unialg\_1 X1) \wedge ((v3\_unialg\_1 X1) \wedge ((v4\_unialg\_1 \\ X1) \wedge (l1\_unialg\_1 X1)))))) \Rightarrow (((v1\_unialg\_1 X0) \wedge (m1\_unialg\_2 \\ X0 X1)) \wedge ((v1\_unialg\_1 X1) \wedge (m1\_unialg\_2 X1 X0))) \Rightarrow (X0 = X1)) \end{aligned}$$