

t19_unialg_2

(TMQJN1Y1N5eJVp3FK7VV8JACLSz69CEAE6f)

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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 $v1_xboole_0 : \iota \Rightarrow o$ 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 $k7_unialg_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k6_unialg_2 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_unialg_1 X0) \wedge ((v3_unialg_1 \\ X0) \wedge ((v4_unialg_1 X0) \wedge (l1_unialg_1 X0)))))) \Rightarrow (\forall X1.(m1_unialg_2 \\ X1 X0) \Rightarrow (\forall X2.(m1_unialg_2 X2 X0) \Rightarrow ((r1_tarski (u1_struct_0 \\ X1) (u1_struct_0 X2)) \Rightarrow (m1_unialg_2 X1 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski X0 X0 \quad (2)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_unialg_1 X0) \wedge ((v3_unialg_1 \\ X0) \wedge ((v4_unialg_1 X0) \wedge (l1_unialg_1 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((\neg (k6_unialg_2 X0 = k1_xboole_0) \wedge \\ (X1 = k1_xboole_0)) \Rightarrow (\forall X2.((v1_unialg_1 X2) \wedge (m1_unialg_2 \\ X2 X0)) \Rightarrow ((X2 = k7_unialg_2 X0 X1) \Leftrightarrow ((r1_tarski X1 (u1_struct_0 X2)) \wedge \\ (\forall X3.(m1_unialg_2 X3 X0) \Rightarrow ((r1_tarski X1 (u1_struct_0 X3)) \Rightarrow \\ (m1_unialg_2 X2 X3)))))))))) \end{aligned} \quad (4)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_unialg_1 X0) \wedge ((v3_unialg_1 \\ X0) \wedge ((v4_unialg_1 X0) \wedge (l1_unialg_1 X0)))))) \Rightarrow (\forall X1.((v1_unialg_1 \\ X1) \wedge (m1_unialg_2 X1 X0)) \Rightarrow (\forall X2.((\neg v1_xboole_0 X2) \wedge (m1_subset_1 \\ X2 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow ((X2 = u1_struct_0 X1) \Rightarrow (k7_unialg_2 \\ X0 X2 = X1)))) \end{aligned}$$