

t18_unialg_2
(TMQDtCkXSiNfPUxBcNoSo3gPzK6wkedxjyd)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_unialg_1 : \iota \Rightarrow o$ 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 $k7_unialg_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_subset_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ 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 $k6_unialg_2 : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ 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.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (2)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_unialg_1 X0) \wedge ((v3_unialg_1 X0) \wedge ((v4_unialg_1 X0) \wedge (l1_unialg_1 X0))))) \Rightarrow (\forall X1. (m1_unialg_2 X1 X0) \Rightarrow (m1_subset_1 (k6_unialg_2 X0) (k1_zfmisc_1 (u1_struct_0 X1)))) \quad (3)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_unialg_1 X0) \wedge ((v3_unialg_1 X0) \wedge ((v4_unialg_1 X0) \wedge (l1_unialg_1 X0))))) \Rightarrow (\forall X1. (m1_unialg_2 X1 X0) \Rightarrow (\forall X2. (m1_unialg_2 X2 X0) \Rightarrow ((r1_tarski (u1_struct_0 X1) (u1_struct_0 X2)) \Rightarrow (m1_unialg_2 X1 X2)))) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_unialg_1 X0) \wedge ((v3_unialg_1 \\ X0) \wedge ((v4_unialg_1 X0) \wedge (l1_unialg_1 X0)))))) \Rightarrow (\forall X1.((\neg \\ v2_struct_0 X1) \wedge ((v2_unialg_1 X1) \wedge ((v3_unialg_1 X1) \wedge ((v4_unialg_1 \\ X1) \wedge (l1_unialg_1 X1)))))) \Rightarrow (((v1_unialg_1 X0) \wedge (m1_unialg_2 \\ X0 X1)) \wedge ((v1_unialg_1 X1) \wedge (m1_unialg_2 X1 X0))) \Rightarrow (X0 = X1))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski X0 X0 \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_unialg_1 X0) \wedge ((v3_unialg_1 \\ X0) \wedge ((v4_unialg_1 X0) \wedge (l1_unialg_1 X0)))))) \Rightarrow (\forall X1.(m1_unialg_2 \\ X1 X0) \Rightarrow ((\neg v2_struct_0 X1) \wedge ((v2_unialg_1 X1) \wedge ((v3_unialg_1 X1) \wedge \\ ((v4_unialg_1 X1) \wedge (l1_unialg_1 X1))))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1.(((\neg v2_struct_0 X0) \wedge ((v2_unialg_1 X0) \wedge \\ ((v3_unialg_1 X0) \wedge ((v4_unialg_1 X0) \wedge (l1_unialg_1 X0)))))) \wedge \\ (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((v1_unialg_1 \\ (k7_unialg_2 X0 X1)) \wedge (m1_unialg_2 (k7_unialg_2 X0 X1) X0))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_unialg_1 X0) \wedge ((v3_unialg_1 \\ X0) \wedge ((v4_unialg_1 X0) \wedge (l1_unialg_1 X0)))))) \Rightarrow (m1_subset_1 (k6_unialg_2 \\ X0) (k1_zfmisc_1 (u1_struct_0 X0))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. k2_subset_1 X0 = X0 \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_unialg_1 X0) \wedge ((v3_unialg_1 \\ X0) \wedge ((v4_unialg_1 X0) \wedge (l1_unialg_1 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((\neg (k6_unialg_2 X0 = k1_xboole_0) \wedge \\ (X1 = k1_xboole_0)) \Rightarrow (\forall X2.((v1_unialg_1 X2) \wedge (m1_unialg_2 \\ X2 X0)) \Rightarrow ((X2 = k7_unialg_2 X0 X1) \Leftrightarrow ((r1_tarski X1 (u1_struct_0 X2)) \wedge \\ (\forall X3.(m1_unialg_2 X3 X0) \Rightarrow ((r1_tarski X1 (u1_struct_0 X3)) \Rightarrow \\ (m1_unialg_2 X2 X3)))))))))) \end{aligned} \quad (11)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v1_unialg_1 X0) \wedge ((v2_unialg_1 \\ X0) \wedge ((v3_unialg_1 X0) \wedge ((v4_unialg_1 X0) \wedge (l1_unialg_1 X0)))))) \Rightarrow \\ (k7_unialg_2 X0 (k2_subset_1 (u1_struct_0 X0)) = X0) \end{aligned}$$