

t30_osalg_1 (TMMVHkdFyHdzjemP- wViT99gHYBmEfGYiJ3r)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v11_struct_0 : \iota \Rightarrow o$ be given. Let $v4_osalg_1 : \iota \Rightarrow o$ be given. Let $v5_osalg_1 : \iota \Rightarrow o$ be given. Let $l3_osalg_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u4_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_osalg_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_eqrel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_osalg_1 : \iota \Rightarrow \iota$ be given. Let $v3_relat_2 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_osalg_1 : \iota \Rightarrow o$ be given. Let $v8_relat_2 : \iota \Rightarrow o$ be given. Let $l2_osalg_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v3_relat_2 X3) \wedge \\ & ((v1_partfun1 X3 X0) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0)))) \Rightarrow ((X1 \in k6_eqrel_1 X0 X0 X3 X2) \Leftrightarrow (k4_tarski X1 X2 \in X3)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 \\ & X0) \wedge (l1_osalg_1 X0))) \wedge ((m1_subset_1 X1 (u4_struct_0 X0)) \wedge (m1_subset_1 \\ & X2 (u4_struct_0 X0)))) \Rightarrow ((r1_osalg_1 X0 X1 X2) \Rightarrow (r1_osalg_1 X0 X2 \\ & X1)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1_osalg_1 X0) \Rightarrow ((v3_relat_2 (u1_osalg_1 X0)) \wedge ((\\ & v8_relat_2 (u1_osalg_1 X0)) \wedge ((v1_partfun1 (u1_osalg_1 X0) (u4_struct_0 \\ & X0)) \wedge (m1_subset_1 (u1_osalg_1 X0) (k1_zfmisc_1 (k2_zfmisc_1 \\ & (u4_struct_0 X0) (u4_struct_0 X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. (l3_osalg_1 X0) \Rightarrow ((l1_osalg_1 X0) \wedge (l2_osalg_1 X0)) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge (l1_osalg_1 \\ & X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u4_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u4_struct_0 X0)) \Rightarrow ((r1_osalg_1 X0 X1 X2) \Leftrightarrow (k4_tarski \\ & X1 X2 \in u1_osalg_1 X0)))) \end{aligned} \tag{5}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v4_osalg_1 \\ & X0) \wedge ((v5_osalg_1 X0) \wedge (l3_osalg_1 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (u4_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u4_struct_0 \\ & X0)) \Rightarrow ((r1_osalg_1 X0 X1 X2) \Leftrightarrow (X2 \in k6_eqrel_1 (u4_struct_0 X0) (\\ & u4_struct_0 X0) (u1_osalg_1 X0) X1)))) \end{aligned}$$