

t34_topgen_1
(TMWYxY7hUBjNSckS9exL4buGyKmtAFXV9sJ)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ 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 $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_setfam_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_topgen_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_topgen_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (r1_tarski X0 (k3_tarski X1)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((r1_tarski X1 X2) \Rightarrow (r1_tarski (k2_topgen_1 X0 X1) (k2_topgen_1 X0 X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0))) \Rightarrow (k5_setfam_1 X0 X1 = k3_tarski X1) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0))) \Rightarrow (m1_subset_1 (k5_setfam_1 X0 X1) (k1_zfmisc_1 X0)) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (m1_subset_1 (k3_topgen_1 X0 X1) (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v2_pre_topc\ X0) \wedge (l1_pre_topc\ X0)) \Rightarrow (\forall X1. \\
& (m1_subset_1\ X1\ (k1_zfmisc_1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))) \Rightarrow \\
& (\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k1_zfmisc_1\ (u1_struct_0 \\
& X0)))) \Rightarrow ((X2 = k3_topgen_1\ X0\ X1) \Leftrightarrow (\forall X3.(m1_subset_1\ X3\ (\\
& k1_zfmisc_1\ (u1_struct_0\ X0))) \Rightarrow ((X3 \in X2) \Leftrightarrow (\exists X4.(m1_subset_1 \\
& X4\ (k1_zfmisc_1\ (u1_struct_0\ X0))) \wedge ((X3 = k2_topgen_1\ X0\ X4) \wedge (\\
& X4 \in X1))))))))) \tag{7}
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.(X1 = k3_tarski\ X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow \\
& (\exists X3.(X2 \in X3) \wedge (X3 \in X0))) \tag{8}
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.(r1_tarski\ X0\ X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow \\
& (X2 \in X1)) \tag{9}
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0\ X0) \wedge ((v2_pre_topc\ X0) \wedge (l1_pre_topc \\
& X0))) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ (k1_zfmisc_1 \\
& (u1_struct_0\ X0)))) \Rightarrow (r1_tarski\ (k5_setfam_1\ (u1_struct_0\ X0) \\
& (k3_topgen_1\ X0\ X1))\ (k2_topgen_1\ X0\ (k5_setfam_1\ (u1_struct_0 \\
& X0\ X1))))
\end{aligned}$$