

t34_topgen_5
(TMYyLM9uhKxaUQZFaDkHcadf1uwBX5TmT54)

October 27, 2020

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 $k3_topgen_5 : \iota$ be given. Let $k7_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k2_topgen_5 : \iota$ be given. Let $k1_topgen_5 : \iota$ be given. Let $k2_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (X0 \in k4_xboole_0 X1 (k1_tarski X2)) \Leftrightarrow ((X0 \in X1) \wedge (X0 \neq X2)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski (k4_xboole_0 X0 X1) X0 \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 k3_topgen_5))) \Rightarrow \\ & ((X0 = k7_subset_1 (u1_struct_0 (k15_euclid np_2)) k2_topgen_5 \\ & \quad k1_topgen_5) \Rightarrow (\forall X1. k2_pre_topc k3_topgen_5 (k7_subset_1 \\ & \quad (u1_struct_0 k3_topgen_5) X0 (k1_tarski X1)) = k2_struct_0 k3_topgen_5)) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (k7_subset_1 X0 X1 X2 = k4_xboole_0 X1 X2) \quad (4)$$

Assume the following.

$$m1_subset_1 k2_topgen_5 (k1_zfmisc_1 (u1_struct_0 (k15_euclid np_2))) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1) \Leftrightarrow ((r1_tarski\ X0\ X1) \wedge (r1_tarski\ X1\ X0)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (\neg X1 \in X0) \quad (8)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1\ X0\ (k1_zfmisc_1\ (u1_struct_0\ k3_topgen_5))) \Rightarrow \\ & ((X0 = k7_subset_1\ (u1_struct_0\ (k15_euclid\ np_2))\ k2_topgen_5 \\ & k1_topgen_5) \Rightarrow (k2_pre_topc\ k3_topgen_5\ X0 = k2_struct_0\ k3_topgen_5)) \end{aligned}$$