

t4_topgen_2 (TM- NppU9Mw85FfSjZakX3R6bofb1WdWd5Rnq)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $k2_topgen_2 : \iota \Rightarrow \iota$ be given. Let $k3_tarski : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_topgen_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_card_1 : \iota \Rightarrow o$ be given. Let $r1_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l1_pre_topc X0)) \Rightarrow ((v1_card_1 \\
& (k3_tarski (ReplSep (toset (\lambda X1 : \iota.m1_subset_1 X1 (u1_struct_0 \\
& X0))) (\lambda X1 : \iota.True) (\lambda X1 : \iota.k1_topgen_2 X0 X1)))) \wedge (\\
& \forall X1.(v1_card_1 X1) \Rightarrow ((X1 = k3_tarski (ReplSep (toset (\lambda X2 : \\
& \iota.m1_subset_1 X2 (u1_struct_0 X0))) (\lambda X2 : \iota.True) (\lambda X2 : \\
& \iota.k1_topgen_2 X0 X2)))) \Rightarrow ((\forall X2.(m1_subset_1 X2 (u1_struct_0 \\
& X0)) \Rightarrow (r1_ordinal1 (k1_topgen_2 X0 X2) X1)) \wedge (\forall X2.(v1_card_1 \\
& X2) \Rightarrow ((\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (r1_ordinal1 \\
& (k1_topgen_2 X0 X3) X2)) \Rightarrow (r1_ordinal1 X1 X2))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\
& (v1_card_1 X1) \Rightarrow ((X1 = k2_topgen_2 X0) \Leftrightarrow ((\forall X2.(m1_subset_1 \\
& X2 (u1_struct_0 X0)) \Rightarrow (r1_ordinal1 (k1_topgen_2 X0 X2) X1)) \wedge (\forall X2. \\
& (v1_card_1 X2) \Rightarrow ((\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow \\
& (r1_ordinal1 (k1_topgen_2 X0 X3) X2)) \Rightarrow (r1_ordinal1 X1 X2))))))
\end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l1_pre_topc X0)) \Rightarrow (k2_topgen_2 \\
& X0 = k3_tarski (ReplSep (toset (\lambda X1 : \iota.m1_subset_1 X1 (u1_struct_0 \\
& X0))) (\lambda X1 : \iota.True) (\lambda X1 : \iota.k1_topgen_2 X0 X1)))
\end{aligned}$$