

t2_nagata_1
(TMbLJCtztQdPTaQcz7fZnJV aZ4NC6LS5PNG)

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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 $v1_nagata_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow \\ & ((v1_nagata_1 X1 X0) \Leftrightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 \\ & X0)) \Rightarrow (\exists X3. ((v3_pre_topc X3 X0) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & (u1_struct_0 X0)))) \wedge ((X2 \in X3) \wedge (\forall X4. (m1_subset_1 X4 (k1_zfmisc_1 \\ & (u1_struct_0 X0))) \Rightarrow (\forall X5. (m1_subset_1 X5 (k1_zfmisc_1 \\ & (u1_struct_0 X0))) \Rightarrow (((X4 \in X1) \wedge (X5 \in X1)) \Rightarrow ((r1_xboole_0 X3 X4) \vee \\ & ((r1_xboole_0 X3 X5) \vee (X4 = X5)))))))))) \quad (2) \end{aligned}$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 \\ & (u1_struct_0 X0)))) \Rightarrow (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (((r1_tarski X1 X2) \wedge (v1_nagata_1 \\ & X2 X0)) \Rightarrow (v1_nagata_1 X1 X0))) \end{aligned}$$