

t20_topreala
(TMKw5iGusgsSLrfl9dVSghxijugtrjwgTgN)

October 27, 2020

Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_topmetr : \iota$ be given. Let $m1_connsp_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_rcomp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. 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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v3_rcomp_1 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k2_topalg_2 : \iota$ be given. Let $v3_topmetr : \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((m1_connsp_2 \\ & X2 X0 X1) \Leftrightarrow (\exists X3. (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 \\ & X0))) \wedge ((v3_pre_topc X3 X0) \wedge ((r1_tarski X3 X2) \wedge (X1 \in X3))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 k3_topmetr))) \Rightarrow ((X0 = \\ & X1) \Rightarrow ((v3_rcomp_1 X0) \Leftrightarrow (v3_pre_topc X1 k3_topmetr)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1_tarski X0 X1) \wedge (r1_tarski X1 X2)) \Rightarrow (r1_tarski X0 X2) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v3_rcomp_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 k1_numbers))) \Rightarrow \\ & (\forall X1. (v1_xreal_0 X1) \Rightarrow (\neg (X1 \in X0) \wedge (\forall X2. (m1_rcomp_1 \\ & X2 X1) \Rightarrow (\neg r1_tarski X2 X0)))) \end{aligned} \quad (4)$$

Assume the following.

$$u1_struct_0 k3_topmetr = k1_numbers \quad (5)$$

Assume the following.

$$k2_topalg_2 = k3_topmetr \quad (6)$$

Assume the following.

$$(v2_pre_topc\ k3_topmetr) \wedge (v3_topmetr\ k3_topmetr) \quad (7)$$

Assume the following.

$$(\neg v2_struct_0\ k3_topmetr) \wedge ((v1_pre_topc\ k3_topmetr) \wedge (v2_pre_topc\ k3_topmetr)) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0\ X0) \wedge ((v2_pre_topc\ X0) \wedge \\ & (l1_pre_topc\ X0))) \wedge (m1_subset_1\ X1\ (u1_struct_0\ X0))) \Rightarrow (\forall X2. \\ & (m1_connsp_2\ X2\ X0\ X1) \Rightarrow (m1_subset_1\ X2\ (k1_zfmisc_1\ (u1_struct_0 \\ & X0)))) \end{aligned} \quad (9)$$

Assume the following.

$$(v2_pre_topc\ k3_topmetr) \wedge (l1_pre_topc\ k3_topmetr) \quad (10)$$

Assume the following.

$$\forall X0. (m1_subset_1\ X0\ k1_numbers) \Rightarrow (v1_xreal_0\ X0) \quad (11)$$

Theorem 1

$$\begin{aligned} & \forall X0. (m1_subset_1\ X0\ (u1_struct_0\ k3_topmetr)) \Rightarrow (\forall X1. \\ & (m1_connsp_2\ X1\ k3_topmetr\ X0) \Rightarrow (\exists X2. (m1_rcomp_1\ X2\ X0) \wedge \\ & (r1_tarski\ X2\ X1))) \end{aligned}$$