

t15_topalg_2

(TMd3HQ6jpxvs3J9qgZtUtmdLARcZuBjskRp)

October 27, 2020

Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_topmetr : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_borsuk_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_topalg_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k6_eqrel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_topalg_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_topalg_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_topalg_2 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_topalg_2 : \iota$ be given. Let $k3_topmetr : \iota$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \Rightarrow (v2_topalg_2 (k4_topmetr X0 X1)))) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_topalg_2 X0) \wedge (m1_pre_topc X0 k2_topalg_2))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\ (\forall X2.(m1_borsuk_2 X2 X0 X1 X1) \Rightarrow (u1_struct_0 (k5_topalg_1 X0 X1) = k1_tarski (k6_eqrel_1 (k2_topalg_1 X0 X1) (k2_topalg_1 X0 X1) (k4_topalg_1 X0 X1) X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$k2_topalg_2 = k3_topmetr \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow ((\neg v2_struct_0 (k4_topmetr X0 X1)) \wedge ((v1_pre_topc (k4_topmetr X0 X1) k3_topmetr))) \wedge (m1_pre_topc (k4_topmetr X0 X1) k3_topmetr))) \quad (4)$$

Theorem 1

$$\begin{aligned} \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k4_topmetr X0 X1))) \Rightarrow (\forall X3.(m1_borsuk_2 X3 (k4_topmetr X0 X1) X2 X2) \Rightarrow (u1_struct_0 (k5_topalg_1 (k4_topmetr X0 X1) X2) = k1_tarski (k6_eqrel_1 (k2_topalg_1 (k4_topmetr X0 X1) X2) (k2_topalg_1 (k4_topmetr X0 X1) X2) (k4_topalg_1 (k4_topmetr X0 X1) X2) X3)))))) \end{aligned}$$