

t3_simplex2 (TM- RKk6AQXn9ZYAxJxkv9AtPapHnxK29neT3)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v6_metric_1 : \iota \Rightarrow o$ be given. Let $v7_metric_1 : \iota \Rightarrow o$ be given. Let $v8_metric_1 : \iota \Rightarrow o$ be given. Let $v9_metric_1 : \iota \Rightarrow o$ be given. Let $l1_metric_1 : \iota \Rightarrow o$ be given. Let $v1_tops_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_pcomps_1 : \iota \Rightarrow \iota$ 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 $m1_simplex2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v1_compts_1 : \iota \Rightarrow o$ be given. Let $m1_setfam_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k9_metric_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((r1_tarski X0 X1) \wedge (r1_tarski X1 X2)) \Rightarrow (r1_tarski X0 X2) \quad (2)$$

Assume the following.

$$\forall X0.(l1_metric_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(v1_xreal_0 X2) \Rightarrow (\forall X3.(v1_xreal_0 X3) \Rightarrow ((r1_xxreal_0 X2 X3) \Rightarrow (r1_tarski (k9_metric_1 X0 X1 X2) (k9_metric_1 X0 X1 X3)))))) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge ((v6_metric_1 X0) \wedge ((v7_metric_1 X0) \wedge ((v8_metric_1 X0) \wedge ((v9_metric_1 X0) \wedge (l1_metric_1 X0)))))) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 (k3_pcomps_1 X0)))))) \Rightarrow (\forall X2.(m1_simplex2 X2 X0 X1) \Rightarrow ((v2_xxreal_0 X2) \wedge (m1_subset_1 X2 k1_numbers))) \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v6_metric_1 X0) \wedge ((v7_metric_1 \\
& X0) \wedge ((v8_metric_1 X0) \wedge ((v9_metric_1 X0) \wedge (l1_metric_1 X0)))))) \Rightarrow \\
& ((v1_compts_1 (k3_pcomps_1 X0)) \Rightarrow (\forall X1.(m1_subset_1 X1 \\
& (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 (k3_pcomps_1 X0)))))) \Rightarrow \\
& (((v1_tops_2 X1 (k3_pcomps_1 X0)) \wedge (m1_setfam_1 X1 (u1_struct_0 \\
& (k3_pcomps_1 X0)))) \Rightarrow (\forall X2.((v2_xreal_0 X2) \wedge (m1_subset_1 \\
& X2 k1_numbers)) \Rightarrow ((m1_simplex2 X2 X0 X1) \Leftrightarrow (\forall X3.(m1_subset_1 \\
& X3 (u1_struct_0 X0)) \Rightarrow (\exists X4.(m1_subset_1 X4 (k1_zfmisc_1 \\
& (u1_struct_0 (k3_pcomps_1 X0)))) \wedge ((X4 \in X1) \wedge (r1_tarSKI (k9_metric_1 \\
& X0 X3 X2) X4)))))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \tag{6}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v6_metric_1 X0) \wedge ((v7_metric_1 \\
& X0) \wedge ((v8_metric_1 X0) \wedge ((v9_metric_1 X0) \wedge (l1_metric_1 X0)))))) \Rightarrow \\
& (\forall X1.((v1_tops_2 X1 (k3_pcomps_1 X0)) \wedge (m1_subset_1 X1 \\
& (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 (k3_pcomps_1 X0)))))) \Rightarrow \\
& (\forall X2.(m1_simplex2 X2 X0 X1) \Rightarrow (\forall X3.((v2_xreal_0 \\
& X3) \wedge (m1_subset_1 X3 k1_numbers)) \Rightarrow (((v1_compts_1 (k3_pcomps_1 \\
& X0)) \wedge ((m1_setfam_1 X1 (u1_struct_0 (k3_pcomps_1 X0))) \wedge (r1_xreal_0 \\
& X3 X2))) \Rightarrow (m1_simplex2 X3 X0 X1))))))
\end{aligned}$$