

t9_hausdorf

(TMEg9RitMDeFkDaZAZ8aZ8EPz4Ea1otpkb4)

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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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v4_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ 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 $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_weierstr : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k2_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v6_metric_1 X0) \wedge ((v7_metric_1 \\
 & X0) \wedge ((v8_metric_1 X0) \wedge ((v9_metric_1 X0) \wedge (l1_metric_1 X0)))))) \Rightarrow \\
 & (\forall X1. ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
 & (u1_struct_0 (k3_pcomps_1 X0)))))) \Rightarrow (\forall X2. (m1_subset_1 \\
 & X2 (u1_struct_0 X0)) \Rightarrow ((X2 \in k2_pre_topc (k3_pcomps_1 X0) X1) \Leftrightarrow (\\
 & k1_funct_1 (k6_weierstr X0 X1) X2 = k6_numbers)))) \tag{1}
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. (l1_pre_topc X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 \\
 & (u1_struct_0 X0))) \Rightarrow (((v4_pre_topc X1 X0) \Rightarrow (k2_pre_topc X0 X1 = \\
 & X1)) \wedge (((v2_pre_topc X0) \wedge (k2_pre_topc X0 X1 = X1)) \Rightarrow (v4_pre_topc \\
 & X1 X0)))) \tag{2}
 \end{aligned}$$

Assume the following.

$$\forall X0. (l1_metric_1 X0) \Rightarrow (l1_pre_topc (k3_pcomps_1 X0)) \tag{3}$$

Theorem 1

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v6_metric_1 X0) \wedge ((v7_metric_1 \\
 & X0) \wedge ((v8_metric_1 X0) \wedge ((v9_metric_1 X0) \wedge (l1_metric_1 X0)))))) \Rightarrow \\
 & (\forall X1. ((\neg v1_xboole_0 X1) \wedge ((v4_pre_topc X1 (k3_pcomps_1 \\
 & X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k3_pcomps_1 \\
 & X0)))))) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((X2 \in \\
 & X1) \Leftrightarrow (k1_funct_1 (k6_weierstr X0 X1) X2 = k6_numbers))))
 \end{aligned}$$