

t35_hausdorf (TMLQXDCn-
wZE7gF669ayLmRv89M14A7qcj5F)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_pcomps_1 : \iota \Rightarrow \iota$ be given. Let $v2_compts_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k1_hausdorf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_weierstr : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k4_xxreal_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k2_square_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v6_metric_1 X0) \wedge ((v7_metric_1 \\
& X0) \wedge ((v8_metric_1 X0) \wedge (v9_metric_1 X0) \wedge (l1_metric_1 X0)))))) \Rightarrow \\
& (\forall X1.((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
& (u1_struct_0 (k3_pcomps_1 X0)))))) \Rightarrow (\forall X2.((\neg v1_xboole_0 \\
& X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 (k3_pcomps_1 X0)))))) \Rightarrow \\
& (((v2_compts_1 X1 (k3_pcomps_1 X0)) \wedge (v2_compts_1 X2 (k3_pcomps_1 \\
& X0))) \Rightarrow (r1_xxreal_0 k6_numbers (k8_weierstr X0 X1 X2))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((k4_xxreal_0 X0 X1 = X0) \vee (k4_xxreal_0 X0 X1 = X1))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers) \wedge (m1_subset_1 X1 k1_numbers)) \Rightarrow (k2_square_1 X0 X1 = k4_xxreal_0 X0 X1) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge((v6_metric_1 \\ & X0)\wedge((v7_metric_1 X0)\wedge((v8_metric_1 X0)\wedge((v9_metric_1 X0)\wedge \\ & (l1_metric_1 X0))))))\wedge((m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & (k3_pcomps_1 X0))))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\ & (k3_pcomps_1 X0))))))\Rightarrow(m1_subset_1 (k8_weierstr X0 X1 X2) k1_numbers) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v6_metric_1 X0)\wedge((v7_metric_1 \\ & X0)\wedge((v8_metric_1 X0)\wedge((v9_metric_1 X0)\wedge(l1_metric_1 X0))))))\Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 (k3_pcomps_1 \\ & X0))))\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\ & (k3_pcomps_1 X0))))\Rightarrow(k1_hausdorff X0 X1 X2 = k2_square_1 (k8_weierstr \\ & X0 X1 X2) (k8_weierstr X0 X2 X1)))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xreal_0 X0) \quad (6)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xreal_0 X0) \quad (7)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v6_metric_1 X0)\wedge((v7_metric_1 \\ & X0)\wedge((v8_metric_1 X0)\wedge((v9_metric_1 X0)\wedge(l1_metric_1 X0))))))\Rightarrow \\ & (\forall X1.((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 (k3_pcomps_1 X0))))))\Rightarrow(\forall X2.((\neg v1_xboole_0 \\ & X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 (k3_pcomps_1 X0))))))\Rightarrow \\ & (((v2_compts_1 X1 (k3_pcomps_1 X0)\wedge(v2_compts_1 X2 (k3_pcomps_1 \\ & X0))))\Rightarrow(r1_xreal_0 k6_numbers (k1_hausdorff X0 X1 X2)))) \end{aligned}$$