

t14_topmetr
(TMGxrL97sRfCmGNsi2DQyw5tWTwQGFyRYwd)

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Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v9_metric_1 : \iota \Rightarrow o$ be given. Let $l1_metric_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k3_pcomps_1 : \iota \Rightarrow \iota$ be given. Let $k9_metric_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_pcomps_1 : \iota \Rightarrow \iota$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Let $k9_setfam_1 : \iota \Rightarrow \iota$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(l1_metric_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(v1_xreal_0 X2) \Rightarrow ((v9_metric_1 X0) \Rightarrow (k9_metric_1 X0 X1 X2 \in k2_pcomps_1 X0)))) \quad (1)$$

Assume the following.

$$\forall X0.(l1_metric_1 X0) \Rightarrow ((u1_struct_0 X0 = u1_struct_0 (k3_pcomps_1 X0)) \wedge (u1_pre_topc (k3_pcomps_1 X0) = k2_pcomps_1 X0)) \quad (2)$$

Assume the following.

$$\forall X0.k9_setfam_1 X0 = k1_zfmisc_1 X0 \quad (3)$$

Assume the following.

$$\forall X0.(l1_metric_1 X0) \Rightarrow (l1_pre_topc (k3_pcomps_1 X0)) \quad (4)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((v3_pre_topc X1 X0) \Leftrightarrow (X1 \in u1_pre_topc X0))) \quad (5)$$

Theorem 1

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.((v9_metric_1 X1) \wedge (l1_metric_1 X1)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X1)) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 (k3_pcomps_1 X1)))) \Rightarrow ((X3 = k9_metric_1 X1 X2 X0) \Rightarrow (v3_pre_topc X3 (k3_pcomps_1 X1))))))$$