

t4_metric_1

(TMSrdj4LMnh2u4jzRJV4s79aA4Tqadtsx2K)

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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 $r1_xreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_metric_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v9_metric_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $u1_metric_1 : \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v5_metric_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_metric_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0. (&l1_metric_1 X0) \Rightarrow ((v1_funct_1 (u1_metric_1 X0)) \wedge \\ &((v1_funct_2 (u1_metric_1 X0) (k2_zfmisc_1 (u1_struct_0 X0) (\\ &u1_struct_0 X0)) k1_numbers) \wedge (m1_subset_1 (u1_metric_1 X0) (\\ &k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 \\ &X0)) k1_numbers)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. (l1_metric_1 X0) \Rightarrow ((v9_metric_1 X0) \Leftrightarrow (v5_metric_1 (u1_metric_1 X0) (u1_struct_0 X0))) \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (&(v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ &(k2_zfmisc_1 (k2_zfmisc_1 X0 X0) k1_numbers)))) \Rightarrow ((v5_metric_1 \\ &X1 X0) \Leftrightarrow (\forall X2. (m1_subset_1 X2 X0) \Rightarrow (\forall X3. (m1_subset_1 \\ &X3 X0) \Rightarrow (\forall X4. (m1_subset_1 X4 X0) \Rightarrow (r1_xreal_0 (k1_metric_1 \\ &X0 X0 X1 X2 X4) (k7_real_1 (k1_metric_1 X0 X0 X1 X2 X3) (k1_metric_1 \\ &X0 X0 X1 X3 X4))))))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0. (&l1_metric_1 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ &X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (k2_metric_1 \\ &X0 X1 X2 = k1_metric_1 (u1_struct_0 X0) (u1_struct_0 X0) (u1_metric_1 \\ &X0) X1 X2))) \end{aligned} \tag{4}$$

Theorem 1

$$\begin{aligned} \forall X0.(l1_metric_1 X0) \Rightarrow & ((\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (r1_xxreal_0 (k2_metric_1 \\ X0 X1 X3) (k7_real_1 (k2_metric_1 X0 X1 X2) (k2_metric_1 X0 X2 X3)))))) \Leftrightarrow \\ & (v9_metric_1 X0)) \end{aligned}$$