

t4_metric_2
(TMF3Und9UT8g7GXKPn7BYdQovUT5tYHFe8E)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v6_metric_1 : \iota \Rightarrow o$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_metric_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_metric_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_metric_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (v6_metric_1 X0) \wedge (l1_metric_1 X0)) \wedge (m1_subset_1 X1 (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 X0))) \Rightarrow (r2_metric_2 X0 X1 X1)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (v6_metric_1 X0) \wedge (l1_metric_1 X0)) \wedge (m1_subset_1 X1 (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 X0))) \Rightarrow ((r2_metric_2 X0 X1 X2) \Leftrightarrow (r1_metric_2 X0 X1 X2))) \quad (2)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_metric_1 X0)) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k1_metric_2 X0 X1 = \text{ReplSep} (to\text{set} (\lambda X2 : \iota. m1_subset_1 X2 (u1_struct_0 X0))) (\lambda X2 : \iota. r1_metric_2 X0 X1 X2)) (\lambda X2 : \iota. X2))) \quad (3)$$

Theorem 1

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (v6_metric_1 X0) \wedge (v8_metric_1 X0) \wedge (v9_metric_1 X0) \wedge (l1_metric_1 X0)) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (X1 \in k1_metric_2 X0 X1))$$