

t12_metric_2

(TMXqyyTyi62eqLSiKW5M9rZ8NgDTuEskaqs)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_metric_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r3_metric_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v6_metric_1 X0) \wedge ((v8_metric_1 \\ X0) \wedge ((v9_metric_1 X0) \wedge (l1_metric_1 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ X0)) \Rightarrow ((X2 \in k1_metric_2 X0 X1) \Leftrightarrow (r3_metric_2 X0 X2 X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v6_metric_1 X0) \wedge ((v7_metric_1 \\ X0) \wedge (l1_metric_1 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r2_metric_2 \\ X0 X1 X2) \Leftrightarrow (X1 = X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v8_metric_1 \\ X0) \wedge (l1_metric_1 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\ m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow ((r3_metric_2 X0 X1 X2) \Leftrightarrow (r1_metric_2 \\ X0 X1 X2)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v6_metric_1 \\ X0) \wedge (l1_metric_1 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\ m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow ((r2_metric_2 X0 X1 X2) \Leftrightarrow (r1_metric_2 \\ X0 X1 X2)) \end{aligned} \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v6_metric_1 X0) \wedge ((v7_metric_1 \\ & X0) \wedge ((v8_metric_1 X0) \wedge ((v9_metric_1 X0) \wedge (l1_metric_1 X0)))))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow ((X2 \in k1_metric_2 X0 X1) \Leftrightarrow (X2 = X1)))) \end{aligned}$$