

t22_metric_2
(TMQ8kAjZcEMsSQFqbNY3kDYLMQi7bBfJJ6M)

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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 $k2_metric_2 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $r4_metric_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_metric_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v6_metric_1 X0) \wedge ((v8_metric_1 \\ & X0) \wedge ((v9_metric_1 X0) \wedge (l1_metric_1 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (k2_metric_2 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k2_metric_2 \\ & X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 k1_numbers) \Rightarrow ((r4_metric_2 \\ & X0 X1 X2 X3) \Leftrightarrow (\exists X4.(m1_subset_1 X4 (u1_struct_0 X0)) \wedge (\exists X5. \\ & (m1_subset_1 X5 (u1_struct_0 X0)) \wedge ((X4 \in X1) \wedge ((X5 \in X2) \wedge (k4_metric_1 \\ & X0 X4 X5 = X3)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((v8_metric_1 X0) \wedge (l1_metric_1 \\ & X0)) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (m1_subset_1 X2 (u1_struct_0 \\ & X0)))) \Rightarrow (k4_metric_1 X0 X1 X2 = k4_metric_1 X0 X2 X1) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v6_metric_1 X0) \wedge ((v8_metric_1 \\ & X0) \wedge ((v9_metric_1 X0) \wedge (l1_metric_1 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (k2_metric_2 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k2_metric_2 \\ & X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 k1_numbers) \Rightarrow ((r4_metric_2 \\ & X0 X1 X2 X3) \Rightarrow (r4_metric_2 X0 X2 X1 X3)))))) \end{aligned}$$