

t2_metric_2

(TMcZuEqNdj1dw7aX2qu73baBotjHkAfb5E3)

October 27, 2020

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 $r3_metric_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_metric_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (&((\neg v2_struct_0 X0) \wedge (v8_metric_1 \\ &X0) \wedge (l1_metric_1 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge \\ &m1_subset_1 X2 (u1_struct_0 X0))) \Rightarrow ((r3_metric_2 X0 X1 X2) \Rightarrow (r3_metric_2 \\ &X0 X2 X1)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (&((\neg v2_struct_0 X0) \wedge (v8_metric_1 \\ &X0) \wedge (l1_metric_1 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge \\ &m1_subset_1 X2 (u1_struct_0 X0))) \Rightarrow ((r3_metric_2 X0 X1 X2) \Leftrightarrow (r1_metric_2 \\ &X0 X1 X2)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2_struct_0 X0) \wedge (l1_metric_1 X0)) \Rightarrow (\forall X1. \\ &(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k1_metric_2 X0 X1 = \text{ReplSep} \\ &(\text{toset } (\lambda X2 : \iota. m1_subset_1 X2 (u1_struct_0 X0))) (\lambda X2 : \\ &\iota. r1_metric_2 X0 X1 X2) (\lambda X2 : \iota. X2))) \end{aligned} \tag{3}$$

Theorem 1

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