

t7_metric_2 (TMN- sKpEwVDm3J4ZYveFhS4HixJ69XCSSLsEr)

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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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_metric_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow ((\forall X3. (m1_subset_1 \\ & X3 X0) \Rightarrow ((X3 \in X1) \Rightarrow (X3 \in X2))) \Rightarrow (r1_tarski X1 X2))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v6_metric_1 X0) \wedge ((v8_metric_1 \\ & X0) \wedge ((v9_metric_1 X0) \wedge (l1_metric_1 X0)))))) \Rightarrow (\forall X1. (m1_subset_1 \\ & X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 \\ & X0)) \Rightarrow ((X2 \in k1_metric_2 X0 X1) \Leftrightarrow (r3_metric_2 X0 X2 X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v6_metric_1 X0) \wedge ((v8_metric_1 \\ & X0) \wedge ((v9_metric_1 X0) \wedge (l1_metric_1 X0)))))) \Rightarrow (\forall X1. (m1_subset_1 \\ & X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (((r3_metric_2 \\ & X0 X1 X2) \wedge (r3_metric_2 X0 X2 X3)) \Rightarrow (r3_metric_2 X0 X1 X3)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v8_metric_1 \\ & X0) \wedge (l1_metric_1 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge \\ & m1_subset_1 X2 (u1_struct_0 X0))) \Rightarrow ((r3_metric_2 X0 X1 X2) \Rightarrow (r3_metric_2 \\ & X0 X2 X1)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_struct_0 X0)\wedge(l1_metric_1 X0))\wedge(m1_subset_1 X1 (u1_struct_0 X0)))\Rightarrow(m1_subset_1 (k1_metric_2 X0 X1) (k1_zfmisc_1 (u1_struct_0 X0))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1)\Leftrightarrow((r1_tarski X0 X1)\wedge(r1_tarski X1 X0)) \quad (6)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0)\wedge((v6_metric_1 X0)\wedge((v8_metric_1 X0)\wedge((v9_metric_1 X0)\wedge(l1_metric_1 X0))))))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow((X2 \in k1_metric_2 X0 X1)\Rightarrow(k1_metric_2 X0 X1 = k1_metric_2 X0 X2))))$$