t10_metric_2 (TMKhwtx-MukamGc3ksDwmFWuof7G1LUZcUjK)

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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 $k4\_metric\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_numbers : \iota$ 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. Let $k1\_xboole\_0 : \iota$ be given. Let $k2\_metric\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v6\_metric\_1\ X0) \wedge ((v8\_metric\_1\ X0) \wedge ((v9\_metric\_1\ X0) \wedge (l1\_metric\_1\ X0))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow (((X2 \in k1\_metric\_2\ X0\ X1) \wedge (X3 \in k1\_metric\_2\ X0\ X1)) \Rightarrow (r3\_metric\_2\ X0\ X2\ X3))))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0) \wedge ((v8\_metric\_1\ X0) \wedge (l1\_metric\_1\ X0))) \wedge ((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \wedge (m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)))) \Rightarrow ((r3\_metric\_2\ X0\ X1\ X2) \Leftrightarrow (r1\_metric\_2\ X0\ X1\ X2)) \tag{2}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v8\_metric\_1\ X0) \wedge (l1\_metric\_1\ X0)) \wedge ((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \wedge (m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)))) \Rightarrow (k4\_metric\_1\ X0\ X1\ X2 = k2\_metric\_1\ X0\ X1\ X2) \tag{4}$$

Assume the following.

$$k1\_xboole\_0 = the\ (\lambda X0 : \iota.v1\_xboole\_0\ X0) \tag{5}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_metric\_1\ X0))\Rightarrow(\forall X1.\ (m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow((r1\_metric\_2\ X0\ X1\ X2)\Leftrightarrow(k2\_metric\_1\ X0\ X1\ X2 = k6\_numbers)))) \tag{6}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v6\_metric\_1\ X0)\wedge((v8\_metric\_1\ X0)\wedge((v9\_metric\_1\ X0)\wedge(l1\_metric\_1\ X0)))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(((X2 \in k1\_metric\_2\ X0\ X1)\wedge(X3 \in k1\_metric\_2\ X0\ X1))\Rightarrow(k4\_metric\_1\ X0\ X2\ X3 = k6\_numbers)))))$$