t25_metric_1 (TMXgH8mMnEFsq943kU1PPnjEbJAboQF6jNv)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ 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 $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_metric\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $v11\_metric\_1 : \iota \Rightarrow o$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $u1\_metric\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_numbers : \iota$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_metric\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v10\_metric\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l1\_struct\_0\ X0)) \Rightarrow (\neg v1\_xboole\_0\ (u1\_struct\_0\ X0)) \tag{1}$$

Assume the following.

$$\forall X0.(l1\_metric\_1\ X0) \Rightarrow ((v1\_funct\_1\ (u1\_metric\_1\ X0)) \wedge ((v1\_funct\_2\ (u1\_metric\_1\ X0)\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0))\ k1\_numbers) \wedge (m1\_subset\_1\ (u1\_metric\_1\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0))\ k1\_numbers))))) \tag{2}$$

Assume the following.

$$\forall X0.(l1\_metric\_1\ X0) \Rightarrow (l1\_struct\_0\ X0) \tag{3}$$

Assume the following.

$$\forall X0.(l1\_metric\_1\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (k2\_metric\_1\ X0\ X1\ X2 = k1\_metric\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)\ (u1\_metric\_1\ X0)\ X1\ X2))) \tag{4}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l1\_metric\_1\ X0)) \Rightarrow ((v11\_metric\_1\ X0) \Leftrightarrow (v10\_metric\_1\ (u1\_metric\_1\ X0)\ (u1\_struct\_0\ X0))) \tag{5}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((v1\_funct\_1\ X1)\wedge(\\ (v1\_funct\_2\ X1\ (k2\_zfmisc\_1\ X0\ X0)\ k1\_numbers)\wedge(m1\_subset\_1\ X1\\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)\ k1\_numbers)))))\Rightarrow\\ ((v10\_metric\_1\ X1\ X0)\Leftrightarrow(\forall X2.(m1\_subset\_1\ X2\ X0)\Rightarrow(\forall X3.\\ (m1\_subset\_1\ X3\ X0)\Rightarrow(\neg(X2\neq X3)\wedge(r1\_xxreal\_0\ (k1\_metric\_1\ X0\ X0\\ X1\ X2\ X3)\ k6\_numbers))))))) \tag{6}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_metric\_1\ X0))\Rightarrow((\forall X1.\\ (m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\\ (u1\_struct\_0\ X0))\Rightarrow(\neg(X1\neq X2)\wedge(r1\_xxreal\_0\ (k2\_metric\_1\ X0\ X1\\ X2)\ k6\_numbers))))\Leftrightarrow(v11\_metric\_1\ X0))$$