t1_kurato_2 (TM-RPPa1ZA7qjgZRHzZMtWp4ngw2bvca8PhK)

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Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_numbers : \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k14\_euclid : \iota \Rightarrow \iota$ be given. Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Let $v3\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9\_metric\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15\_euclid : \iota \Rightarrow \iota$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $l1\_metric\_1 : \iota \Rightarrow o$ be given. Let $v1\_metric\_1 : \iota \Rightarrow o$ be given. Let $v6\_metric\_1 : \iota \Rightarrow o$ be given. Let $v7\_metric\_1 : \iota \Rightarrow o$ be given. Let $v8\_metric\_1 : \iota \Rightarrow o$ be given. Let $v9\_metric\_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (u1\_struct\_0\ (k15\_euclid\ X0) = u1\_struct\_0\ (k14\_euclid\ X0)) \tag{1}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ k1\_numbers) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ X0))))) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ (k14\_euclid\ X0))) \Rightarrow ((X2 = k9\_metric\_1\ (k14\_euclid\ X0)\ X3\ X1) \Rightarrow (v3\_pre\_topc\ X2\ (k15\_euclid\ X0))))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1\ X0\ X1) \tag{3}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((l1\_metric\_1\ X0) \wedge ((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \wedge (v1\_xreal\_0\ X2))) \Rightarrow (m1\_subset\_1\ (k9\_metric\_1\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \tag{5}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow ((v1\_metric\_1\ (k14\_euclid\ X0)) \wedge ((v6\_metric\_1\ (k14\_euclid\ X0)) \wedge ((v7\_metric\_1\ (k14\_euclid\ X0)) \wedge ((v8\_metric\_1\ (k14\_euclid\ X0)) \wedge ((v9\_metric\_1\ (k14\_euclid\ X0)) \wedge (l1\_metric\_1\ (k14\_euclid\ X0))))))) \tag{6}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Leftrightarrow (X0 \in k1\_numbers) \tag{7}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1) \Rightarrow (v7\_ordinal1\ X0) \tag{8}$$

Theorem 1

$$\forall X0.(m1\_subset\_1\ X0\ k5\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ (k14\_euclid\ X0))) \Rightarrow (\forall X2.(v1\_xreal\_0\ X2) \Rightarrow ((v3\_pre\_topc\ (k9\_metric\_1\ (k14\_euclid\ X0)\ X1\ X2)\ (k15\_euclid\ X0)) \wedge (m1\_subset\_1\ (k9\_metric\_1\ (k14\_euclid\ X0)\ X1\ X2)\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ X0)))))))$$