

t4_funct_2

(TMGCeesmv6U5TLQrmULMfHpEXxUGENZfjis)

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Let $v1_funct.1 : \iota \Rightarrow o$ be given. Let $v1_funct.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc.1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole.0 : \iota$ be given. Let $k1_funct.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_relset.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat.1 : \iota \Rightarrow o$ be given. Let $v5_relat.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple.0 : \iota \Rightarrow \iota$ be given. Let $v4_relat.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple.0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. ((v1_relat.1 X1) \wedge (v5_relat.1 X1 X0)) \Rightarrow (k2_relset.1 X0 X1 = k10_xtuple.0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat.1 X1) \wedge (v4_relat.1 X1 X0)) \Rightarrow (k1_relset.1 X0 X1 = k9_xtuple.0 X1) \quad (2)$$

Assume the following.

$$\forall X0. ((v1_relat.1 X0) \wedge (v1_funct.1 X0)) \Rightarrow (\forall X1. (X1 = k10_xtuple.0 X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (\exists X3. (X3 \in k9_xtuple.0 X0) \wedge (X2 = k1_funct.1 X0 X3)))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset.1 X2 (k1_zfmisc.1 (k2_zfmisc.1 X0 X1))) \Rightarrow (((X1 \neq k1_xboole.0) \Rightarrow ((v1_funct.2 X2 X0 X1) \Leftrightarrow (X0 = k1_relset.1 X0 X2))) \wedge ((X1 = k1_xboole.0) \Rightarrow ((v1_funct.2 X2 X0 X1) \Leftrightarrow (X2 = k1_xboole.0)))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset.1 X2 (k1_zfmisc.1 (k2_zfmisc.1 X0 X1))) \Rightarrow ((v4_relat.1 X2 X0) \wedge (v5_relat.1 X2 X1)) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset.1 X2 (k1_zfmisc.1 (k2_zfmisc.1 X0 X1))) \Rightarrow (v1_relat.1 X2) \quad (6)$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X3)\wedge ((v1_funct_2 X3 X0 X1)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))))\Rightarrow((X2 \in X0)\Rightarrow((X1 = k1_xboole_0)\vee(k1_funct_1 X3 X2 \in k2_relset_1 X1 X3)))$$