

t1_fuzzy_2 (TMPHyVqnhWeiLKB- mGd7DvZDwHkFsrXgUNVT)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_fuzzy_1 : \iota \Rightarrow \iota$ be given. Let $k5_fuzzy_1 : \iota \Rightarrow \iota$ be given. Let $np_0 : \iota$ be given. Let $k7_rfunct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_funct_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (v1_xboole_0 X1) \quad (1)$$

Assume the following.

$$\forall X0. (v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 X0) \Rightarrow \\ (\forall X2. ((v5_relat_1 X2 (k1_rcomp_1 k6_numbers np_1)) \wedge \\ (v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 k1_numbers) \wedge (m1_subset_1 \\ X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))))) \Rightarrow ((r1_xxreal_0 \\ (k1_seq_1 (k4_fuzzy_1 X0) X1) (k1_seq_1 X2 X1)) \wedge (r1_xxreal_0 (\\ k1_seq_1 X2 X1) (k1_seq_1 (k5_fuzzy_1 X0) X1)))))) \end{aligned} \quad (4)$$

Assume the following.

$$v1_xboole_0 np_0 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.k7_rfunc1\ X0\ X1 = k4_func3\ X0\ X1 \quad (6)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1\ X0)\wedge((v1_func1\ X0)\wedge(v3_valued_0\ X0)))\Rightarrow(k1_seq1\ X0\ X1 = k1_func1\ X0\ X1) \quad (8)$$

Assume the following.

$$v3_membered\ k1_numbers \quad (9)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0\ X0)\Rightarrow((v5_relat_1\ (k5_fuzzy_1\ X0)\ (k1_rcomp_1\ k6_numbers\ np_1))\wedge((v1_func1\ (k5_fuzzy_1\ X0))\wedge((v1_func2\ (k5_fuzzy_1\ X0)\ X0\ k1_numbers)\wedge(m1_subset_1\ (k5_fuzzy_1\ X0)\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ k1_numbers)))))) \quad (10)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0\ X0)\Rightarrow((v5_relat_1\ (k4_fuzzy_1\ X0)\ (k1_rcomp_1\ k6_numbers\ np_1))\wedge((v1_func1\ (k4_fuzzy_1\ X0))\wedge((v1_func2\ (k4_fuzzy_1\ X0)\ X0\ k1_numbers)\wedge(m1_subset_1\ (k4_fuzzy_1\ X0)\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ k1_numbers)))))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1\ (k4_func3\ X0\ X1))\wedge(v1_func1\ (k4_func3\ X0\ X1)) \quad (12)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0\ X0)\Rightarrow(k5_fuzzy_1\ X0 = k7_rfunc1\ X0\ X0) \quad (13)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0\ X0)\Rightarrow(k4_fuzzy_1\ X0 = k7_rfunc1\ k1_xboole_0\ X0) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_relat_1\ X2)\wedge(v1_func1\ X2))\Rightarrow((X2 = k4_func3\ X0\ X1)\Leftrightarrow((k9_xtuple_0\ X2 = X1)\wedge(\forall X3.(X3 \in X1)\Rightarrow(((X3 \in X0)\Rightarrow(k1_func1\ X2\ X3 = np_1))\wedge((\neg X3 \in X0)\Rightarrow(k1_func1\ X2\ X3 = k1_xboole_0)))))) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.(v3_membered\ X1)\Rightarrow(\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow(v3_valued_0\ X2)) \quad (16)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow \\ & (\forall X2.((v5_relat_1 X2 (k1_rcomp_1 k6_numbers np_1)) \wedge \\ & (v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 k1_numbers) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))))) \Rightarrow ((r1_xxreal_0 \\ & k6_numbers (k1_seq_1 X2 X1)) \wedge (r1_xxreal_0 (k1_seq_1 X2 X1) np_1)))) \end{aligned}$$