

t1_fuzzy_4

(TMYhxJY8JBoUv1ZMzr5vLiVb9jkDTX8rKfe)

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Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_xxreal_2 : \iota \Rightarrow o$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k4_seq_4 : \iota \Rightarrow \iota$ be given. Let $k5_seq_4 : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $v2_measure5 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $np_0 : \iota$ be given. Let $k3_seq_4 : \iota \Rightarrow \iota$ be given. Let $k2_seq_4 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v3_xxreal_2 : \iota \Rightarrow o$ be given. Let $k9_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_xxreal_2 : \iota \Rightarrow o$ be given. Let $k10_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (v1_xboole_0 X1) \tag{1}$$

Assume the following.

$$\forall X0. (v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \tag{3}$$

Assume the following.

$$\forall X0. (v2_membered X0) \Rightarrow (\forall X1. (v2_membered X1) \Rightarrow ((r1_tarski X0 X1) \wedge (v5_xxreal_2 X1)) \Rightarrow (v5_xxreal_2 X0)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 (k1_zfmisc_1 X1))\Leftrightarrow(r1_tarSKI X0 X1) \quad (5)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(\forall X1.(v1_xreal_0 X1)\Rightarrow(((r1_xxreal_0 X0 X1)\wedge(v2_xxreal_0 X0))\Rightarrow(v2_xxreal_0 X1))) \quad (6)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers))\Rightarrow(((\neg v1_xboole_0 X0)\wedge(v2_measure5 X0))\Leftrightarrow(\exists X1.(m1_subset_1 X1 k1_numbers)\wedge(\exists X2.(m1_subset_1 X2 k1_numbers)\wedge((r1_xxreal_0 X1 X2)\wedge(X0 = k1_rcomp_1 X1 X2)))))) \quad (7)$$

Assume the following.

$$((v2_xxreal_0 np_1)\wedge(m2_subset_1 np_1 k1_numbers k5_numbers))\wedge((m1_subset_1 np_1 k5_numbers)\wedge(m1_subset_1 np_1 k1_numbers)) \quad (8)$$

Assume the following.

$$(m2_subset_1 np_0 k1_numbers k5_numbers)\wedge((m1_subset_1 np_0 k5_numbers)\wedge(m1_subset_1 np_0 k1_numbers)) \quad (9)$$

Assume the following.

$$v1_xboole_0 np_0 \quad (10)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (11)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers))\Rightarrow(k5_seq_4 X0 = k3_seq_4 X0) \quad (12)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers))\Rightarrow(k4_seq_4 X0 = k2_seq_4 X0) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v5_relat_1 X1 X0))\Rightarrow(k2_relset_1 X0 X1 = k10_xtuple_0 X1) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v3_valued_0 X0)))\Rightarrow(k1_seq_1 X0 X1 = k1_funct_1 X0 X1) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v4_relat_1 X1 X0))\Rightarrow(k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.v1_relat_1 (k2_zfmisc_1 X0 X1) \quad (17)$$

Assume the following.

$$v3_membered k1_numbers \quad (18)$$

Assume the following.

$$\forall X0.(v3_membered X0)\Rightarrow(v1_xreal_0 (k3_seq_4 X0)) \quad (19)$$

Assume the following.

$$\forall X0.(v3_membered X0)\Rightarrow(v1_xreal_0 (k2_seq_4 X0)) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v5_relat_1 X1 X0))\Rightarrow(m1_subset_1 (k2_relset_1 X0 X1) (k1_zfmisc_1 X0)) \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0)\wedge(v1_xreal_0 X1))\Rightarrow(m1_subset_1 (k1_rcomp_1 X0 X1) (k1_zfmisc_1 k1_numbers)) \quad (22)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge(v1_funct_1 X0))\Rightarrow(\forall X1.(X1 = k10_xtuple_0 X0)\Leftrightarrow(\forall X2.(X2 \in X1)\Leftrightarrow(\exists X3.(X3 \in k9_xtuple_0 X0)\wedge(X2 = k1_funct_1 X0 X3)))) \quad (23)$$

Assume the following.

$$\forall X0.(v3_membered X0)\Rightarrow((v3_xxreal_2 X0)\Rightarrow((v1_xboole_0 X0)\vee(\forall X1.(v1_xreal_0 X1)\Rightarrow((X1 = k3_seq_4 X0)\Leftrightarrow((\forall X2.(v1_xreal_0 X2)\Rightarrow((X2 \in X0)\Rightarrow(r1_xxreal_0 X1 X2))))\wedge(\forall X2.(v1_xreal_0 X2)\Rightarrow(\neg(\neg r1_xxreal_0 X2 k6_numbers)\wedge(\forall X3.(v1_xreal_0 X3)\Rightarrow(\neg(X3 \in X0)\wedge(\neg r1_xxreal_0 (k9_binop_2 X1 X2) X3)))))))))) \quad (24)$$

Assume the following.

$$\forall X0.(v3_membered X0)\Rightarrow((v4_xxreal_2 X0)\Rightarrow((v1_xboole_0 X0)\vee(\forall X1.(v1_xreal_0 X1)\Rightarrow((X1 = k2_seq_4 X0)\Leftrightarrow((\forall X2.(v1_xreal_0 X2)\Rightarrow((X2 \in X0)\Rightarrow(r1_xxreal_0 X2 X1))))\wedge(\forall X2.(v1_xreal_0 X2)\Rightarrow(\neg(\neg r1_xxreal_0 X2 k6_numbers)\wedge(\forall X3.(v1_xreal_0 X3)\Rightarrow(\neg(X3 \in X0)\wedge(\neg r1_xxreal_0 X3 (k10_binop_2 X1 X2)))))))))) \quad (25)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 X1)\Rightarrow((v5_relat_1 X1 X0)\Leftrightarrow(r1_tarski (k10_xtuple_0 X1) X0)) \quad (26)$$

Assume the following.

$$\forall X0.(v2_membered X0)\Rightarrow((v5_xxreal_2 X0)\Leftrightarrow((v3_xxreal_2 X0)\wedge(v4_xxreal_2 X0))) \quad (27)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow((r1_xxreal_0 X0 X1)\vee(r1_xxreal_0 X1 X0)) \quad (28)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers))\Rightarrow(v3_membered X0) \quad (29)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xxreal_0 X0) \quad (30)$$

Assume the following.

$$\forall X0.(v3_membered X0)\Rightarrow(v2_membered X0) \quad (31)$$

Assume the following.

$$\forall X0.((v1_xxreal_0 X0)\wedge(v2_xxreal_0 X0))\Rightarrow((\neg v1_xboole_0 X0)\wedge((v1_xxreal_0 X0)\wedge(\neg v3_xxreal_0 X0))) \quad (32)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge(v5_relat_1 X0 k1_numbers))\Rightarrow((v1_relat_1 X0)\wedge(v3_valued_0 X0)) \quad (33)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \quad (34)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(v1_relat_1 X1)) \quad (35)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers))\Rightarrow(((\neg v1_xboole_0 X0)\wedge(v2_measure5 X0))\Rightarrow(v5_xxreal_2 X0)) \quad (36)$$

Assume the following.

$$\forall X0.(v2_membered\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ X0)) \Rightarrow (v2_membered\ X1)) \quad (37)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k1_numbers) \Rightarrow (v1_xreal_0\ X0) \quad (38)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0\ X0) \Rightarrow (\forall X1.((v5_relat_1\ X1\ (k1_rcomp_1 \\ & k6_numbers\ np_1)) \wedge ((v1_funct_1\ X1) \wedge ((v1_funct_2\ X1\ X0\ k1_numbers) \wedge \\ & (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ k1_numbers)))))) \Rightarrow \\ & ((v5_xxreal_2\ (k2_relset_1\ k1_numbers\ X1)) \wedge ((\forall X2.(X2 \in \\ & k1_relset_1\ X0\ X1) \Rightarrow (r1_xxreal_0\ (k1_seq_1\ X1\ X2)\ (k4_seq_4\ (k2_relset_1 \\ & k1_numbers\ X1)))) \wedge (\forall X2.(X2 \in k1_relset_1\ X0\ X1) \Rightarrow (r1_xxreal_0 \\ & (k5_seq_4\ (k2_relset_1\ k1_numbers\ X1))\ (k1_seq_1\ X1\ X2)))))) \end{aligned}$$