

l28_taxonom1

(TMVE4UaEP1PRHSdy2wZwrGg9CpEwA8JutLc)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ 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 $k1_numbers : \iota$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_relat_2 : \iota \Rightarrow o$ be given. Let $v8_relat_2 : \iota \Rightarrow o$ be given. Let $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k13_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_taxonom1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_eqrel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge (\\ m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) k1_numbers)))) \Rightarrow \\ (\forall X2.(v1_xreal_0 X2) \Rightarrow (\forall X3.(v1_xreal_0 X3) \Rightarrow ((r1_xxreal_0 \\ X2 X3) \Rightarrow (r1_relset_1 X0 X0 (k1_taxonom1 X0 X1 X2) (k1_taxonom1 X0 \\ X1 X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. \forall X3. ((v3_relat_2 X3) \wedge \\ ((v1_partfun1 X3 X0) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\ X0 X0)))) \Rightarrow ((X1 \in k6_eqrel_1 X0 X0 X3 X2) \Leftrightarrow (k4_tarski X1 X2 \in X3)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (k2_zfmisc_1 X0 X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ (k2_zfmisc_1 X0 X0))) \Rightarrow ((r1_relset_1 X0 X0 X1 X2) \Rightarrow (r1_relset_1 \\ X0 X0 (k13_lang1 X0 X1) (k13_lang1 X0 X2)))))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. \forall X3. ((m1_subset_1 X2 \\ (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ (k2_zfmisc_1 X0 X1)))) \Rightarrow ((r2_relset_1 X0 X1 X2 X3) \Leftrightarrow (X2 = X3)) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((r1_relset_1 X0 X1 X2 X3)\Leftrightarrow(r1_tarski X2 X3)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge(((v1_funct_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) k1_numbers))))\wedge(v1_xreal_0 X2)))\Rightarrow(m1_subset_1 (k1_taxonom1 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))))\Rightarrow(m1_subset_1 (k13_lang1 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow(X2 \in X1)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.k2_tarski X0 X1 = k2_tarski X1 X0 \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.(\neg v1_xboole_0 X1)\Rightarrow(\forall X2.((\neg v3_xreal_0 X2)\wedge(v1_xreal_0 X2))\Rightarrow(\forall X3.((\neg v3_xreal_0 X3)\wedge(v1_xreal_0 X3))\Rightarrow((r1_xreal_0 X2 X3)\Rightarrow(\forall X4.((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X1 X1) k1_numbers))))\Rightarrow(\forall X5.((v1_partfun1 X5 X1)\wedge((v3_relat_2 X5)\wedge((v8_relat_2 X5)\wedge(m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 X1 X1))))))\Rightarrow(\forall X6.((v1_partfun1 X6 X1)\wedge((v3_relat_2 X6)\wedge((v8_relat_2 X6)\wedge(m1_subset_1 X6 (k1_zfmisc_1 (k2_zfmisc_1 X1 X1))))))\Rightarrow(((r2_relset_1 X1 X1 X5 (k13_lang1 X1 (k1_taxonom1 X1 X4 X2)))\wedge(r2_relset_1 X1 X1 X6 (k13_lang1 X1 (k1_taxonom1 X1 X4 X3))))\Rightarrow(r1_tarski (k6_eqrel_1 X1 X1 X5 X0) (k6_eqrel_1 X1 X1 X6 X0)))))))))) \end{aligned}$$