

t10_taxonom1 (TM-
SpU3911G4kmeE99QHDzd2XQ5QCTxLtZs8)

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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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k13_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relat_1 : \iota \Rightarrow \iota$ be given. Let $k18_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(v1_relat_1 X1) \Rightarrow ((r1_tarski X0 X1) \Rightarrow (r1_tarski (k1_relat_1 X0) (k1_relat_1 X1)))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow ((r1_relset_1 X0 X1 X2 X3) \Leftrightarrow (r1_tarski X2 X3)) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))) \Rightarrow (k13_lang1 X0 X1 = k18_finseq_1 X1) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))) \Rightarrow (m1_subset_1 (k13_lang1 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \quad (5)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Leftrightarrow (\forall X1. \neg(X1 \in X0) \wedge (\forall X2. \forall X3. X1 \neq k4_tarski X2 X3)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(v1_relat_1 X1) \Rightarrow ((X1 = \\ k18_finseq_1 X0) \Leftrightarrow (\forall X2. \forall X3.(k4_tarski X2 X3 \in X1) \Leftrightarrow \\ ((X2 \in k1_relat_1 X0) \wedge ((X3 \in k1_relat_1 X0) \wedge (\exists X4. ((v1_relat_1 \\ X4) \wedge ((v1_funct_1 X4) \wedge (v1_finseq_1 X4)))) \wedge ((r1_xxreal_0 np_1 \\ (k3_finseq_1 X4) \wedge ((k1_funct_1 X4 np_1 = X2) \wedge ((k1_funct_1 X4 \\ (k3_finseq_1 X4) = X3) \wedge (\forall X5.(v7_ordinal1 X5) \Rightarrow ((r1_xxreal_0 \\ np_1 X5) \Rightarrow ((r1_xxreal_0 (k3_finseq_1 X4) X5) \vee (k4_tarski (k1_funct_1 \\ X4 X5) (k1_funct_1 X4 (k1_nat_1 X5 np_1)) \in X0)))))))))))))) \quad (7) \end{aligned}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (8)$$

Theorem 1

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