t14_taxonom1 (TMS63FqsoQKch2efofgrbj9RMtoMv4QWzsk)

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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 $k1\_partit1 : \iota \Rightarrow \iota$ be given. Let $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Let $k10\_eqrel\_1 : \iota \Rightarrow \iota$ be given. Let $m1\_taxonom1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_setfam\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_eqrel\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (r1\_setfam\_1\ (k10\_eqrel\_1\ X0)\ (k1\_tarski\ X0)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.r1\_setfam\_1\ X0\ X0 \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2\_tarski\ X0\ X1) \Leftrightarrow (\forall X3.(X3 \in X2) \Leftrightarrow ((X3 = X0) \vee (X3 = X1))) \tag{3}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_partit1\ X0))) \Rightarrow ((m1\_taxonom1\ X1\ X0) \Leftrightarrow (\forall X2.(m1\_eqrel\_1\ X2\ X0) \Rightarrow (\forall X3.(m1\_eqrel\_1\ X3\ X0) \Rightarrow (\neg(X2 \in X1) \wedge ((X3 \in X1) \wedge ((\neg r1\_setfam\_1\ X2\ X3) \wedge (\neg r1\_setfam\_1\ X3\ X2)))))))) \tag{4}$$

Theorem 1

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_partit1\ X0))) \Rightarrow ((X1 = k2\_tarski\ (k1\_tarski\ X0)\ (k10\_eqrel\_1\ X0)) \Rightarrow (m1\_taxonom1\ X1\ X0)))$$