

t13\_taxonom1  
(TMRotD5mxvuNVcx2er4DhKEHPaDF2z3sS8p)

October 27, 2020

Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_taxonom1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k10\_eqrel\_1 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_setfam\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_eqrel\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_partit1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarski X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. r1\_setfam\_1 X0 X0 \quad (2)$$

Assume the following.

$$\forall X0. m1\_eqrel\_1 (k10\_eqrel\_1 X0) X0 \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (r1\_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (X1 = k1\_partit1 X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (m1\_eqrel\_1 X2 X0)) \quad (5)$$

Assume the following.

$$\forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_partit1 X0))) \Rightarrow ((m1\_taxonom1 X1 X0) \Leftrightarrow (\forall X2. (m1\_eqrel\_1 X2 X0) \Rightarrow (\forall X3. (m1\_eqrel\_1 X3 X0) \Rightarrow (\neg (X2 \in X1) \wedge ((X3 \in X1) \wedge (\neg r1\_setfam\_1 X2 X3) \wedge (\neg r1\_setfam\_1 X3 X2)))))))) \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. (X1 = k1\_tarski X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (7)$$

**Theorem 1**

$$\forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (m1\_taxonom1 (k1\_tarski (k10\_eqrel\_1 X0)) X0)$$