

## t12\_taxonom1

(TMFm3mVb7NoSnnTnEqNqH4Qwcbfn8wFhkQY)

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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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_eqrel\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_setfam\_1 : \iota \Rightarrow \iota \Rightarrow o$  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.

$$\forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (m1\_eqrel\_1 (k1\_tarski X0) X0) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (r1\_tarski (k1\_tarski X0) X1) \Leftrightarrow (X0 \in X1) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. (m1\_eqrel\_1 X1 X0) \Rightarrow \\ (\forall X2. (m1\_eqrel\_1 X2 X0) \Rightarrow (\neg (X1 \in k1\_tarski (k1\_tarski X0)) \wedge \\ ((X2 \in k1\_tarski (k1\_tarski X0)) \wedge (\neg r1\_setfam\_1 X1 X2) \wedge (\neg r1\_setfam\_1 \\ X2 X1)))))) \end{aligned} \quad (4)$$

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.

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

### Theorem 1

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