

t137\_zfmisc\_1

(TMVLtHJ8YQy6AUCE5h6HUhgewi2sT3xd2bW)

October 27, 2020

Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1\_tarski X0 X1) \wedge (r1\_tarski X2 X1)) \Rightarrow (r1\_tarski (k2\_xboole\_0 X0 X2) X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (r1\_tarski (k2\_xboole\_0 X0 X1) X2) \Rightarrow (r1\_tarski X0 X2) \quad (2)$$

Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. k2\_xboole\_0 X0 X1 = k2\_xboole\_0 X1 X0 \quad (4)$$

**Theorem 1**

$$\forall X0. \forall X1. \forall X2. (r1\_tarski (k2\_xboole\_0 X2 (k1\_tarski X0)) X1) \Leftrightarrow ((X0 \in X1) \wedge (r1\_tarski X2 X1))$$