

t55\_zfmisc\_1

(TMcAJz3ZhiNBWZFqjqx8XxYcTKg5RjShra8)

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Let  $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (X2 = k3\_xboole\_0 X0 X1) \Leftrightarrow (\forall X3. \\ (X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (X3 \in X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (X2 = k2\_tarski X0 X1) \Leftrightarrow (\forall X3. \\ (X3 \in X2) \Leftrightarrow ((X3 = X0) \vee (X3 = X1))) \end{aligned} \quad (2)$$

**Theorem 1**

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (k3\_xboole\_0 (k2\_tarski X0 X1) \\ X2 = k2\_tarski X0 X1) \Rightarrow (X0 \in X2) \end{aligned}$$