

t6\_zf\_fund1  
(TMMLjP1KLMXb5jToSfZh4UuXDM5fH1rDi1Z)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_classes2 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $v8\_zf\_fund1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k3\_tarski : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \neg(X0 \in X1) \wedge (v1\_xboole\_0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1\_xboole\_0 X0) \wedge (v1\_classes2 X0)) \Rightarrow (\forall X1. \\ & ((\neg v1\_xboole\_0 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))) \Rightarrow (\forall X2. \\ & \forall X3. ((v8\_zf\_fund1 X1 X0) \wedge ((X2 \in X1) \wedge (X3 \in X1))) \Rightarrow ((k2\_xboole\_0 \\ & X2 X3 \in X1) \wedge ((k6\_subset\_1 X2 X3 \in X1) \wedge (k3\_relat\_1 X2 X3 \in X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1\_xboole\_0 X0) \wedge (v1\_classes2 X0)) \Rightarrow (\forall X1. \\ & ((\neg v1\_xboole\_0 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))) \Rightarrow (\forall X2. \\ & \forall X3. (v8\_zf\_fund1 X1 X0) \Rightarrow (((X2 \in X1) \Rightarrow (k1\_tarski X2 \in X1)) \wedge \\ & (((k1\_tarski X2 \in X1) \Rightarrow (X2 \in X1)) \wedge ((X3 \in X1) \Rightarrow (k3\_tarski X3 \in X1)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. k2\_tarski X0 X1 = k2\_xboole\_0 (k1\_tarski X0) (k1\_tarski X1) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. k4\_tarski X0 X1 = k2\_tarski (k2\_tarski X0 X1) (k1\_tarski X0) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. k2\_tarski X0 X1 = k2\_tarski X1 X0 \quad (6)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (v1\_xboole\_0 X1)) \quad (7)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v1\_xboole\_0 X0) \wedge (v1\_classes2 X0)) \Rightarrow (\forall X1. \\ & ((\neg v1\_xboole\_0 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))) \Rightarrow (\forall X2. \\ & \forall X3.((v8\_zf\_fund1 X1 X0) \wedge ((X2 \in X1) \wedge (X3 \in X1))) \Rightarrow ((k2\_tarSKI \\ & X2 X3 \in X1) \wedge (k4\_tarSKI X2 X3 \in X1)))) \end{aligned}$$