

t5\_domain\_1  
(TMVDq591HuMjy67miYd8HCSD565bjibySjh)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k3\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_xtuple\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. (\neg v1\_xboole\_0 X1) \Rightarrow \\ & (\forall X2. (\neg v1\_xboole\_0 X2) \Rightarrow (\forall X3. (\neg v1\_xboole\_0 X3) \Rightarrow \\ & ((\forall X4. (X4 \in X0) \Leftrightarrow (\exists X5. (m1\_subset\_1 X5 X1) \wedge (\exists X6. \\ & (m1\_subset\_1 X6 X2) \wedge (\exists X7. (m1\_subset\_1 X7 X3) \wedge (X4 = k3\_xtuple\_0 \\ & X5 X6 X7)))))) \Rightarrow (X0 = k3\_zfmisc\_1 X1 X2 X3)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (\neg v1\_xboole\_0 X1) \Rightarrow (\forall X2. (\neg v1\_xboole\_0 \\ & X2) \Rightarrow (\forall X3. (\neg v1\_xboole\_0 X3) \Rightarrow ((X0 \in k3\_zfmisc\_1 X1 X2 X3) \Leftrightarrow \\ & (\exists X4. (m1\_subset\_1 X4 X1) \wedge (\exists X5. (m1\_subset\_1 X5 X2) \wedge \\ & (\exists X6. (m1\_subset\_1 X6 X3) \wedge (X0 = k3\_xtuple\_0 X4 X5 X6)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. k3\_xtuple\_0 X0 X1 X2 = k4\_tarski \\ & (k4\_tarski X0 X1) X2 \end{aligned} \quad (4)$$

**Theorem 1**

$$\begin{aligned} & \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. (\neg v1\_xboole\_0 X1) \Rightarrow \\ & (\forall X2. (\neg v1\_xboole\_0 X2) \Rightarrow (\forall X3. (\neg v1\_xboole\_0 X3) \Rightarrow \\ & ((X0 = k3\_zfmisc\_1 X1 X2 X3) \Leftrightarrow (\forall X4. (X4 \in X0) \Leftrightarrow (\exists X5. ( \\ & m1\_subset\_1 X5 X1) \wedge (\exists X6. (m1\_subset\_1 X6 X2) \wedge (\exists X7. \\ & (m1\_subset\_1 X7 X3) \wedge (X4 = k3\_xtuple\_0 X5 X6 X7)))))))))) \end{aligned}$$