t3_domain_1 (TMX3yHvZV2LHB5irvd1CYQMkubwzt66toV6)

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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. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. (k3\_xtuple\_0\ X0\ X1\ X2 \in k3\_zfmisc\_1\ X3\ X4\ X5) \Leftrightarrow ((X0 \in X3) \wedge ((X1 \in X4) \wedge (X2 \in X5))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\neg(X0 \in k3\_zfmisc\_1\ X1\ X2\ X3) \wedge (\forall X4.\forall X5.\forall X6.\neg(X4 \in X1) \wedge ((X5 \in X2) \wedge ((X6 \in X3) \wedge (X0 = k3\_xtuple\_0\ X4\ X5\ X6)))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ X1) \Rightarrow ((v1\_xboole\_0\ X1) \vee (X0 \in X1)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1\ X0\ X1) \tag{4}$$

Theorem 1

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