

t38\_eqrel\_1  
(TMVsfGqRYGd74EhshhoTuiP3fYgtQcB727K)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_eqrel\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k11\_eqrel\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k5\_setfam\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\neg(X0 \in X1) \wedge ((m1\_subset\_1 X1 (k1\_zfmisc\_1 X2)) \wedge (v1\_xboole\_0 X2)) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 X0))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k1\_zfmisc\_1 X0))) \Rightarrow ((\forall X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 X0)) \Rightarrow ((X3 \in X1) \Leftrightarrow (X3 \in X2))) \Rightarrow (X1 = X2))) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1 X0 X1) \quad (6)$$

Assume the following.

$$\forall X0.\exists X1.m1\_subset\_1 X1 X0 \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_eqrel\_1 X1 X0)\Rightarrow(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 X0))) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1\_xboole\_0 X0)\Rightarrow(\forall X1.(m1\_subset\_1 X1 X0)\Rightarrow \\ (\forall X2.(m1\_eqrel\_1 X2 X0)\Rightarrow(\forall X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 X0))\Rightarrow \\ X0)\Rightarrow((X3 = k11\_eqrel\_1 X0 X1 X2)\Leftrightarrow((X1 \in X3)\wedge(X3 \in X2)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 X0)))\Rightarrow((m1\_eqrel\_1 X1 X0)\Leftrightarrow((k5\_setfam\_1 X0 X1 = X0)\wedge(\forall X2. \\ (m1\_subset\_1 X2 (k1\_zfmisc\_1 X0))\Rightarrow((X2 \in X1)\Rightarrow((X2\neq k1\_xboole\_0)\wedge \\ (\forall X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 X0))\Rightarrow(\neg(X3 \in X1)\wedge((X2\neq \\ X3)\wedge(\neg r1\_xboole\_0 X2 X3)))))))))) \end{aligned} \quad (10)$$

Assume the following.

$$k1\_xboole\_0 = the (\lambda X0 : \iota.v1\_xboole\_0 X0) \quad (11)$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0 X0)\Rightarrow(\forall X1.(m1\_eqrel\_1 X1 X0)\Rightarrow (\neg v1\_xboole\_0 X1)) \quad (12)$$

**Theorem 1**

$$\begin{aligned} \forall X0.(\neg v1\_xboole\_0 X0)\Rightarrow(\forall X1.(m1\_eqrel\_1 X1 X0)\Rightarrow \\ (\forall X2.(m1\_eqrel\_1 X2 X0)\Rightarrow((\forall X3.(m1\_subset\_1 X3 X0)\Rightarrow \\ (k11\_eqrel\_1 X0 X3 X1 = k11\_eqrel\_1 X0 X3 X2))\Rightarrow(X1 = X2)))) \end{aligned}$$