

## t42\_eqrel\_1

(TMM1QnYRBD5MQBfE7jiSFErW6uCby5CjXkk)

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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  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  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.

$$\forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (\neg(X1 \neq k1\_xboole\_0) \wedge (\forall X2. (m1\_subset\_1 X2 X0) \Rightarrow (\neg X2 \in X1))) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \quad (2)$$

Assume the following.

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

Assume the following.

$$\forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 X0) \Rightarrow (\forall X2. (m1\_eqrel\_1 X2 X0) \Rightarrow (\forall X3. (m1\_subset\_1 X3 (k1\_zfmisc\_1 X0)) \Rightarrow ((X3 = k11\_eqrel\_1 X0 X1 X2) \Leftrightarrow ((X1 \in X3) \wedge (X3 \in X2)))))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 X0))) \Rightarrow ((m1\_eqrel\_1 X1 X0) \Leftrightarrow ((k5\_setfam\_1 X0 X1 = X0) \wedge (\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 X0)) \Rightarrow ((X2 \in X1) \Rightarrow ((X2 \neq k1\_xboole\_0) \wedge (\forall X3. (m1\_subset\_1 X3 (k1\_zfmisc\_1 X0)) \Rightarrow (\neg(X3 \in X1) \wedge ((X2 \neq X3) \wedge (\neg r1\_xboole\_0 X2 X3)))))))))) \quad (5)$$

### Theorem 1

$$\forall X0. \forall X1. (\neg v1\_xboole\_0 X1) \Rightarrow (\forall X2. (m1\_eqrel\_1 X2 X1) \Rightarrow (\neg(X0 \in X2) \wedge (\forall X3. (m1\_subset\_1 X3 X1) \Rightarrow (X0 \neq k11\_eqrel\_1 X1 X3 X2))))$$