

## t16\_relset\_2

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k3\_tarski : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (X1 = k3\_tarski (ReplSep (toset (\lambda X2 : \iota.m1\_subset\_1 X2 X0)) (\lambda X2 : \iota.X2 \in X1) (\lambda X2 : \iota.k1\_tarski X2)))) \quad (1)$$

Assume the following.

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

Assume the following.

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

Assume the following.

$$\forall X0.\neg v1\_xboole\_0 (k1\_zfmisc\_1 X0) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k3\_tarski X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (\exists X3.(X2 \in X3) \wedge (X3 \in X0))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0) \Rightarrow ((m1\_subset\_1 X1 X0) \Leftrightarrow (X1 \in X0))) \wedge ((v1\_xboole\_0 X0) \Rightarrow ((m1\_subset\_1 X1 X0) \Leftrightarrow (v1\_xboole\_0 X1))) \quad (6)$$

### Theorem 1

$$\forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (m1\_subset\_1 (ReplSep (toset (\lambda X2 : \iota.m1\_subset\_1 X2 X0)) (\lambda X2 : \iota.X2 \in X1) (\lambda X2 : \iota.k1\_tarski X2)) (k1\_zfmisc\_1 (k1\_zfmisc\_1 X0))))$$