

## t44\_subset\_1

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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  $r2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k7\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k4\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \neg(r2\_xboole\_0 X0 X1) \wedge (\forall X2. \neg(X2 \in X1) \wedge (\neg X2 \in X0)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (k7\_subset\_1 X0 X1 X2 = k4\_xboole\_0 X1 X2) \quad (2)$$

Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. \forall X2. (r1\_tarski X0 X1) \Rightarrow ((X2 \in X0) \vee (r1\_tarski X0 (k4\_xboole\_0 X1 (k1\_tarski X2)))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (r2\_xboole\_0 X0 X1) \Leftrightarrow ((r1\_tarski X0 X1) \wedge (X0 \neq X1)) \quad (5)$$

### Theorem 1

$$\begin{aligned} & \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. ((\neg v1\_xboole\_0 X1) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))) \Rightarrow (\forall X2. ((\neg v1\_xboole\_0 \\ & X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 X0))) \Rightarrow (\neg(r2\_xboole\_0 X1 X2) \wedge \\ & (\forall X3. (m1\_subset\_1 X3 X0) \Rightarrow (\neg(X3 \in X2) \wedge (r1\_tarski X1 (k7\_subset\_1 \\ & X0 X2 (k1\_tarski X3)))))))))) \end{aligned}$$