

# t70\_xboole\_1 (TMYDiHzVtkWqXvb- mZkhwrYXJggK3KmdsfZE)

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Let  $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (\neg(\neg r1\_xboole\_0 X0 X1) \wedge (\forall X2. \neg(X2 \in X0) \wedge (X2 \in X1))) \wedge (\neg(\exists X2. (X2 \in X0) \wedge (X2 \in X1)) \wedge (r1\_xboole\_0 X0 X1)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (r1\_xboole\_0 X0 X1) \Rightarrow (r1\_xboole\_0 X1 X0) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (X2 = k2\_xboole\_0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \vee (X3 \in X1))) \quad (3)$$

**Theorem 1**

$$\forall X0. \forall X1. \forall X2. (\neg(\neg r1\_xboole\_0 X0 (k2\_xboole\_0 X1 X2)) \wedge ((r1\_xboole\_0 X0 X1) \wedge (r1\_xboole\_0 X0 X2))) \wedge (\neg(\neg(r1\_xboole\_0 X0 X1) \wedge (r1\_xboole\_0 X0 X2)) \wedge (r1\_xboole\_0 X0 (k2\_xboole\_0 X1 X2)))$$