

t5_xboole_0 (TM-
RGr7XZbvRGUD1sEm8dpXKswVAxvLJ3B2n)

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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.

$$\forall X0. \forall X1. \forall X2. (X2 = k2_xboole_0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \vee (X3 \in X1))) \quad (2)$$

Theorem 1

$$\forall X0. \forall X1. \forall X2. \neg(r1_xboole_0 X0 X1) \wedge ((X2 \in k2_xboole_0 X0 X1) \wedge (\neg(X2 \in X0) \wedge (\neg(X2 \in X1)) \wedge (\neg(X2 \in X1) \wedge (\neg(X2 \in X0))))))$$