

t1_xregular
(TMSdU9CXBPDwxu1d7XdY8wg7Ebd8VawAVR4)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ 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.

$$\forall X0. \forall X1. \neg(X0 \in X1) \wedge (\forall X2. \neg(X2 \in X1) \wedge (\forall X3. \neg(X3 \in X1) \wedge (X3 \in X2))) \quad (2)$$

Assume the following.

$$\forall X0. (v1_xboole_0 X0) \Leftrightarrow (\forall X1. \neg X1 \in X0) \quad (3)$$

Theorem 1

$$\forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\exists X1. (X1 \in X0) \wedge (r1_xboole_0 X1 X0))$$