

t179_relat_1
(TMHZoq1i3k1fzbdnPcJEy2XbvWvFeztbARb)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\forall X0. (v1_relat_1 X0) \Leftrightarrow (\forall X1. \neg(X1 \in X0) \wedge (\forall X2. \forall X3. X1 \neq k4_tarski X2 X3)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (X1 = k9_xtuple_0 X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (\exists X3. k4_tarski X2 X3 \in X0)) \quad (3)$$

Theorem 1

$$\forall X0. (v1_relat_1 X0) \Rightarrow (\forall X1. (v1_relat_1 X1) \Rightarrow ((r1_xboole_0 (k9_xtuple_0 X0) (k9_xtuple_0 X1)) \Rightarrow (r1_xboole_0 X0 X1)))$$