

t133_relat_1
(TMRYak4aeEfsJGukkGeUBBvxFspCJVPFAz7)

October 27, 2020

Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k8_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (v1_relat_1 X2) \Rightarrow ((X0 \in k8_relat_1 X2 X1) \Leftrightarrow (\exists X3. (X3 \in k10_xtuple_0 X2) \wedge ((k4_tarski X0 X3 \in X2) \wedge (X3 \in X1)))) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (X2 = k3_xboole_0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (X3 \in X1))) \quad (2)$$

Assume the following.

$$\forall X0. (v1_relat_1 X0) \Rightarrow (\forall X1. \forall X2. (X2 = k8_relat_1 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow (\exists X4. (k4_tarski X3 X4 \in X0) \wedge (X4 \in X1)))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. k3_xboole_0 X0 X1 = k3_xboole_0 X1 X0 \quad (4)$$

Theorem 1

$$\forall X0. \forall X1. (v1_relat_1 X1) \Rightarrow (k8_relat_1 X1 X0 = k8_relat_1 X1 (k3_xboole_0 (k10_xtuple_0 X1) X0))$$