

t32_relat_1
(TMLT1KUiVLbqv1s984PyLHVxmUF8Pab2GuS)

October 27, 2020

Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X0) \wedge (v1_relat_1 X1)) \Rightarrow (v1_relat_1 (k2_xboole_0 X0 X1)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. v1_relat_1 (k3_relat_1 X0 X1) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (v1_relat_1 X2) \Rightarrow ((X2 = k3_relat_1 X0 X1) \Leftrightarrow (\forall X3. \forall X4. (k4_tarski X3 X4 \in X2) \Leftrightarrow (\exists X5. (k4_tarski X3 X5 \in X0) \wedge (k4_tarski X5 X4 \in X1)))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (X2 = k2_xboole_0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \vee (X3 \in X1))) \quad (5)$$

Assume the following.

$$\forall X0. (v1_relat_1 X0) \Rightarrow (\forall X1. (v1_relat_1 X1) \Rightarrow ((X0 = X1) \Leftrightarrow (\forall X2. \forall X3. (k4_tarski X2 X3 \in X0) \Leftrightarrow (k4_tarski X2 X3 \in X1)))) \quad (6)$$

Theorem 1

$$\forall X0. (v1_relat_1 X0) \Rightarrow (\forall X1. (v1_relat_1 X1) \Rightarrow (\forall X2. (v1_relat_1 X2) \Rightarrow (k3_relat_1 X0 (k2_xboole_0 X1 X2) = k2_xboole_0 (k3_relat_1 X0 X1) (k3_relat_1 X0 X2))))$$