

t2_eqrel_1
(TMPTa4GTKqAjFVtQfyEohJCt8f6cJdpaoY7)

October 27, 2020

Let $r1_relat_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_partfun1 : \iota \Rightarrow \iota$ be given. Let $r3_relat_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r8_relat_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_relat_1 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. k6_partfun1 X0 = k4_relat_1 X0 \quad (1)$$

Assume the following.

$$\forall X0. (v1_relat_1 (k4_relat_1 X0)) \wedge ((v4_relat_1 (k4_relat_1 X0) X0) \wedge ((v1_funct_1 (k4_relat_1 X0)) \wedge (v1_partfun1 (k4_relat_1 X0) X0))) \quad (2)$$

Assume the following.

$$\forall X0. (v1_relat_1 X0) \Rightarrow (\forall X1. (r8_relat_2 X0 X1) \Leftrightarrow (\forall X2. \forall X3. \forall X4. ((X2 \in X1) \wedge ((X3 \in X1) \wedge ((X4 \in X1) \wedge (k4_tarski X2 X3 \in X0) \wedge (k4_tarski X3 X4 \in X0))))) \Rightarrow (k4_tarski X2 X4 \in X0))) \quad (3)$$

Assume the following.

$$\forall X0. (v1_relat_1 X0) \Rightarrow (\forall X1. (r3_relat_2 X0 X1) \Leftrightarrow (\forall X2. \forall X3. ((X2 \in X1) \wedge ((X3 \in X1) \wedge (k4_tarski X2 X3 \in X0))) \Rightarrow (k4_tarski X3 X2 \in X0))) \quad (4)$$

Assume the following.

$$\forall X0. (v1_relat_1 X0) \Rightarrow (\forall X1. (r1_relat_2 X0 X1) \Leftrightarrow (\forall X2. (X2 \in X1) \Rightarrow (k4_tarski X2 X2 \in X0))) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 X1) \Rightarrow ((X1 = k4_relat_1 X0) \Leftrightarrow (\forall X2. \forall X3. (k4_tarski X2 X3 \in X1) \Leftrightarrow ((X2 \in X0) \wedge (X2 = X3)))) \quad (6)$$

Theorem 1

$$\forall X0.(r1_relat_2 (k6_partfun1 X0) X0) \wedge ((r3_relat_2 (k6_partfun1 X0) X0) \wedge (r8_relat_2 (k6_partfun1 X0) X0))$$