

t83_funct_1

(TMX6WUbhe1RcX48AqK9awhhbSoiVo9Lewce)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (v1_relat_1 X2) \Rightarrow ((X0 \in k7_relat_1 X2 X1) \Leftrightarrow (\exists X3. (X3 \in k9_xtuple_0 X2) \wedge ((k4_tarski X3 X0 \in X2) \wedge (X3 \in X1)))) \quad (1)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. \forall X2. (X2 = k8_relat_1 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in k9_xtuple_0 X0) \wedge (k1_funct_1 X0 X3 \in X1)))) \quad (2)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v2_funct_1 X0) \Leftrightarrow (\forall X1. \forall X2. ((X1 \in k9_xtuple_0 X0) \wedge ((X2 \in k9_xtuple_0 X0) \wedge (k1_funct_1 X0 X1 = k1_funct_1 X0 X2)))) \Rightarrow (X1 = X2))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (4)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. \forall X2. ((X1 \in k9_xtuple_0 X0) \Rightarrow ((X2 = k1_funct_1 X0 X1) \Leftrightarrow (k4_tarski X1 X2 \in X0))) \wedge ((\neg X1 \in k9_xtuple_0 X0) \Rightarrow ((X2 = k1_funct_1 X0 X1) \Leftrightarrow (X2 = k1_xboole_0)))) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (X1 = k1_tarski X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (6)$$

Theorem 1

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((\forall X1. r1_tarski \\ (k8_relat_1 X0 (k7_relat_1 X0 X1)) X1) \Rightarrow (v2_funct_1 X0))$$