

t10_card_5

(TMP8RbZmbKL3bsEQdULuGKTtCWf45Zv4r21)

October 27, 2020

Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v5_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_ordinal2 : \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v2_ordinal2 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((\\ v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (((k9_xtuple_0 X0 = k9_xtuple_0 \\ X1) \wedge (\forall X2.(X2 \in k9_xtuple_0 X0) \Rightarrow (k1_funct_1 X0 X2 = k1_funct_1 \\ X1 X2)))) \Rightarrow (X0 = X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v5_ordinal1 \\ X0) \wedge (v1_ordinal2 X0)))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 \\ X1) \wedge ((v5_ordinal1 X1) \wedge (v1_ordinal2 X1)))) \Rightarrow (((k10_xtuple_0 \\ X0 = k10_xtuple_0 X1) \wedge ((v2_ordinal2 X0) \wedge (v2_ordinal2 X1))) \Rightarrow (\\ \forall X2.(v3_ordinal1 X2) \Rightarrow ((X2 \in k9_xtuple_0 X0) \Rightarrow ((X2 \in k9_xtuple_0 \\ X1) \wedge (k1_funct_1 X0 X2 = k1_funct_1 X1 X2)))))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v5_ordinal1 X0))) \Rightarrow (v3_ordinal1 (k9_xtuple_0 X0)) \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1) \Leftrightarrow ((r1_tarski\ X0\ X1) \wedge (r1_tarski\ X1\ X0)) \quad (6)$$

Assume the following.

$$\forall X0.(v3_ordinal1\ X0) \Rightarrow (\forall X1.(m1_subset.1\ X1\ X0) \Rightarrow (v3_ordinal1\ X1)) \quad (7)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_relat.1\ X0) \wedge ((v1_funct.1\ X0) \wedge ((v5_ordinal1 \\ & X0) \wedge (v1_ordinal2\ X0)))) \Rightarrow (\forall X1.((v1_relat.1\ X1) \wedge ((v1_funct.1 \\ & X1) \wedge ((v5_ordinal1\ X1) \wedge (v1_ordinal2\ X1)))) \Rightarrow (((k10_xtuple.0 \\ & X0 = k10_xtuple.0\ X1) \wedge ((v2_ordinal2\ X0) \wedge (v2_ordinal2\ X1))) \Rightarrow (\\ & X0 = X1))) \end{aligned}$$