

t30_ordinal6

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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 $k3_ordinal6 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $r1_abian : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_ordinal1 : \iota \Rightarrow \iota$ be given. Let $k2_ordinal6 : \iota \Rightarrow \iota$ be given. Let $k1_ordinal6 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v5_ordinal1 \\ X0) \wedge (v1_ordinal2 X0)))) \Rightarrow (k2_ordinal1 (ReplSep (toset (\lambda X1 : \\ \iota.m1_subset_1 X1 (k9_xtuple_0 X0))) (\lambda X1 : \iota.r1_abian X1 \\ X0) (\lambda X1 : \iota.X1)) = ReplSep (toset (\lambda X1 : \iota.m1_subset_1 \\ X1 (k9_xtuple_0 X0))) (\lambda X1 : \iota.r1_abian X1 X0) (\lambda X1 : \iota. \\ X1)) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((r1_abian \\ X0 X1) \Rightarrow (X0 \in k10_xtuple_0 X1)) \quad (2)$$

Assume the following.

$$\forall X0.(k9_xtuple_0 (k2_ordinal6 X0) = k1_ordinal6 X0) \wedge (k10_xtuple_0 \\ (k2_ordinal6 X0) = k2_ordinal1 X0) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v5_ordinal1 \\ X0) \wedge (v1_ordinal2 X0)))) \Rightarrow (k3_ordinal6 X0 = k2_ordinal6 (ReplSep \\ (toset (\lambda X1 : \iota.m1_subset_1 X1 (k9_xtuple_0 X0))) (\lambda X1 : \\ \iota.r1_abian X1 X0) (\lambda X1 : \iota.X1))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow \\ (X2 \in X1)) \quad (5)$$

Theorem 1

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v5_ordinal1 \\ X0) \wedge (v1_ordinal2 X0)))) \Rightarrow ((k10_xtuple_0 (k3_ordinal6 X0) = ReplSep \\ (toset (\lambda X1 : \iota.m1_subset_1 X1 (k9_xtuple_0 X0))) (\lambda X1 : \\ \iota.r1_abian X1 X0) (\lambda X1 : \iota.X1)) \wedge (r1_tarski (k10_xtuple_0 \\ (k3_ordinal6 X0)) (k10_xtuple_0 X0))) \end{aligned}$$