

t25_ordinal2

(TMRgY8x7dciVEPtH9ZTcuC8ga1vgYBSwtoG)

October 27, 2020

Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v5_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_ordinal2 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v5_relat_1 X1 X0) \wedge (v1_funct_1 X1))) \Rightarrow (\forall X2. (X2 \in k9_xtuple_0 X1) \Rightarrow (k1_funct_1 X1 X2 \in X0)) \quad (2)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v1_ordinal2 X0) \Leftrightarrow (\exists X1. (v3_ordinal1 X1) \wedge (r1_tarski (k10_xtuple_0 X0) X1))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 X1) \Rightarrow ((v5_relat_1 X1 X0) \Leftrightarrow (r1_tarski (k10_xtuple_0 X1) X0)) \quad (4)$$

Theorem 1

$$\forall X0. (v3_ordinal1 X0) \Rightarrow (\forall X1. ((v5_ordinal1 X1) \wedge ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_ordinal2 X1)))) \Rightarrow ((X0 \in k9_xtuple_0 X1) \Rightarrow (v3_ordinal1 (k1_funct_1 X1 X0))))$$