

t4_ordinal5 (TMbuefyWcrMkJVXNrGWGnjegp- KvWvZwGgTQ)

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 $k1_ordinal4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v5_ordinal1 X0))) \Rightarrow \\ & (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v5_ordinal1 \\ & X1)))) \Rightarrow ((r1_tarski (k10_xtuple_0 X0) (k10_xtuple_0 (k1_ordinal4 \\ & X0 X1))) \wedge (r1_tarski (k10_xtuple_0 X1) (k10_xtuple_0 (k1_ordinal4 \\ & X0 X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1_tarski X0 X1) \wedge (r1_tarski X1 X2)) \Rightarrow (r1_tarski X0 X2) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1_relat_1 X0) \wedge ((v5_ordinal1 X0) \wedge (\\ & v1_funct_1 X0))) \wedge ((v1_relat_1 X1) \wedge ((v5_ordinal1 X1) \wedge (v1_funct_1 \\ & X1)))) \Rightarrow ((v1_relat_1 (k1_ordinal4 X0 X1)) \wedge ((v5_ordinal1 (k1_ordinal4 \\ & X0 X1)) \wedge (v1_funct_1 (k1_ordinal4 X0 X1)))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v1_ordinal2 X0) \Leftrightarrow (\exists X1. (v3_ordinal1 X1) \wedge (r1_tarski (k10_xtuple_0 X0) X1))) \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v5_ordinal1 X0))) \Rightarrow \\ & (\forall X1. ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v5_ordinal1 \\ & X1)))) \Rightarrow ((v1_ordinal2 (k1_ordinal4 X0 X1)) \Rightarrow ((v1_ordinal2 X0) \wedge \\ & (v1_ordinal2 X1)))) \end{aligned}$$