

t20_ordinal3
(TMdprfoDXhVQdCjvkL85Pho476Qdww5LTsb)

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Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k11_ordinal2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v3_ordinal1 X0) \Rightarrow (\forall X1.(v3_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v3_ordinal1 X2) \Rightarrow ((r1_ordinal1 X0 X1) \Rightarrow (r1_ordinal1 (k11_ordinal2 \\ & X2 X0) (k11_ordinal2 X2 X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v3_ordinal1 X0) \Rightarrow (\forall X1.(v3_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v3_ordinal1 X2) \Rightarrow ((r1_ordinal1 X0 X1) \Rightarrow (r1_ordinal1 (k11_ordinal2 \\ & X0 X2) (k11_ordinal2 X1 X2)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((r1_tarski X0 X1) \wedge (r1_tarski X1 X2)) \Rightarrow (r1_tarski X0 X2) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((v3_ordinal1 X0) \wedge (v3_ordinal1 X1)) \Rightarrow (r1_ordinal1 X0 X1) \Leftrightarrow (r1_tarski X0 X1) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v3_ordinal1 X0) \wedge (v3_ordinal1 X1)) \Rightarrow (v3_ordinal1 (k11_ordinal2 X0 X1)) \tag{5}$$

Theorem 1

$$\begin{aligned} & \forall X0.(v3_ordinal1 X0) \Rightarrow (\forall X1.(v3_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v3_ordinal1 X2) \Rightarrow (\forall X3.(v3_ordinal1 X3) \Rightarrow (((r1_ordinal1 \\ & X0 X1) \wedge (r1_ordinal1 X2 X3)) \Rightarrow (r1_ordinal1 (k11_ordinal2 X0 X2) \\ & (k11_ordinal2 X1 X3)))))) \end{aligned}$$