

t62_ordinal3

(TMdyh7WtGD2NfZiMfoDMpqWRXqsiLEnreoF)

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Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_ordinal2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_ordinal3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Assume the following.

$$\forall X0.(v3_ordinal1 X0) \Rightarrow (k10_ordinal2 X0 k1_xboole_0 = X0) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((v3_ordinal1 X0) \wedge (v3_ordinal1 X1)) \Rightarrow (v3_ordinal1 (k5_ordinal3 X0 X1)) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v3_ordinal1 X0) \Rightarrow (\forall X1.(v3_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v3_ordinal1 X2) \Rightarrow (((r1_ordinal1 X1 X0) \Rightarrow ((X2 = k5_ordinal3 X0 X1) \Leftrightarrow \\ & (X0 = k10_ordinal2 X1 X2))) \wedge ((\neg r1_ordinal1 X1 X0) \Rightarrow ((X2 = k5_ordinal3 \\ & X0 X1) \Leftrightarrow (X2 = k1_xboole_0)))))) \quad (3) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.((v3_ordinal1 X0) \wedge (v3_ordinal1 X1)) \Rightarrow (r1_ordinal1 X0 X1) \vee (r1_ordinal1 X1 X0) \quad (4)$$

Theorem 1

$$\forall X0.(v3_ordinal1 X0) \Rightarrow (\forall X1.(v3_ordinal1 X1) \Rightarrow (r1_ordinal1 X0 (k10_ordinal2 X1 (k5_ordinal3 X0 X1))))$$