

t59_ordinal3 (TMGVdQPস্যুয়ড- FezdiW9NCp9oW791FTeYuan)

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Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_ordinal3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k10_ordinal2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. r1_tarski\ k1_xboole_0\ X0 \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (v3_ordinal1\ X0) \Rightarrow (\forall X1. (v3_ordinal1\ X1) \Rightarrow (\forall X2. \\ (v3_ordinal1\ X2) \Rightarrow ((r1_ordinal1\ (k10_ordinal2\ X0\ X1)\ (k10_ordinal2 \\ X0\ X2)) \Rightarrow (r1_ordinal1\ X1\ X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1_tarski\ X0\ X1) \wedge (r1_tarski\ X1\ X2)) \Rightarrow (r1_tarski\ X0\ X2) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((v3_ordinal1\ X0) \wedge (v3_ordinal1\ X1)) \Rightarrow (r1_ordinal1\ X0\ X1) \Leftrightarrow (r1_tarski\ X0\ X1) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. ((v3_ordinal1\ X0) \wedge (v3_ordinal1\ X1)) \Rightarrow (v3_ordinal1\ (k5_ordinal3\ X0\ X1)) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0. (v3_ordinal1\ X0) \Rightarrow (\forall X1. (v3_ordinal1\ X1) \Rightarrow (\forall X2. \\ (v3_ordinal1\ X2) \Rightarrow (((r1_ordinal1\ X1\ X0) \Rightarrow ((X2 = k5_ordinal3\ X0\ X1) \Leftrightarrow \\ (X0 = k10_ordinal2\ X1\ X2))) \wedge ((\neg r1_ordinal1\ X1\ X0) \Rightarrow ((X2 = k5_ordinal3 \\ X0\ X1) \Leftrightarrow (X2 = k1_xboole_0)))))) \end{aligned} \quad (6)$$

Theorem 1

$$\begin{aligned} \forall X0. (v3_ordinal1\ X0) \Rightarrow (\forall X1. (v3_ordinal1\ X1) \Rightarrow (\forall X2. \\ (v3_ordinal1\ X2) \Rightarrow ((r1_ordinal1\ X0\ X1) \Rightarrow (r1_ordinal1\ (k5_ordinal3 \\ X0\ X2)\ (k5_ordinal3\ X1\ X2)))))) \end{aligned}$$