

179_ordinal6

(TMU6hXnudLn5eqS4t9HCPrrzxiao4sUvfuW5)

October 27, 2020

Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_classes2 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_ordinal6 : \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_ordinal1 : \iota \Rightarrow \iota$ be given. Let $v2_ordinal6 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_ordinal1 : \iota \Rightarrow \iota$ be given. Let $v2_classes1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_ordinal6 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v3_ordinal6 : \iota \Rightarrow o$ be given. Let $v5_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_ordinal2 : \iota \Rightarrow o$ be given. Let $v3_ordinal2 : \iota \Rightarrow o$ be given. Let $k2_ordinal6 : \iota \Rightarrow \iota$ be given. Let $v2_ordinal2 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $r1_abian : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_wellord1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_wellord2 : \iota \Rightarrow \iota$ be given. Let $k1_ordinal6 : \iota \Rightarrow \iota$ be given. Let $k2_wellord2 : \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k6_ordinal6 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_ordinal1 : \iota \Rightarrow o$ be given. Let $k7_ordinal6 : \iota \Rightarrow \iota$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v3_ordinal1 X0) \Rightarrow (\forall X1.((v2_classes1 X1) \wedge (X0 \in X1)) \Rightarrow ((k1_ordinal1 X0 \in X1) \wedge (r1_tarski X0 X1))) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge (v1_classes2 X0)) \Rightarrow (\forall X1. \\ & ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (k2_ordinal1 X0) (k2_ordinal1 \\ & X0)) \wedge ((v2_ordinal6 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k2_ordinal1 X0) (k2_ordinal1 X0)))))) \Rightarrow ((k4_ordinal1 \in X0) \Rightarrow \\ & ((v1_funct_1 (k3_ordinal6 X1)) \wedge ((v1_funct_2 (k3_ordinal6 X1) \\ & (k2_ordinal1 X0) (k2_ordinal1 X0)) \wedge (m1_subset_1 (k3_ordinal6 \\ & X1) (k1_zfmisc_1 (k2_zfmisc_1 (k2_ordinal1 X0) (k2_ordinal1 X0))))))))) \quad (2) \end{aligned}$$

Assume the following.

$$\forall X0.(v3_ordinal1 X0) \Rightarrow ((\neg v1_xboole_0 (k1_ordinal1 X0)) \wedge (v3_ordinal1 (k1_ordinal1 X0))) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v3_ordinal6 X0)))\Rightarrow((v1_relat_1 (k1_funct_1 X0 X1))\wedge(v1_funct_1 (k1_funct_1 X0 X1))) \quad (4)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge((v5_ordinal1 X0)\wedge((v1_ordinal2 X0)\wedge(v2_ordinal6 X0)))))\Rightarrow((v1_relat_1 (k3_ordinal6 X0))\wedge((v1_funct_1 (k3_ordinal6 X0))\wedge((v5_ordinal1 (k3_ordinal6 X0))\wedge((v1_ordinal2 (k3_ordinal6 X0))\wedge(v3_ordinal2 (k3_ordinal6 X0)))))) \quad (5)$$

Assume the following.

$$\forall X0.(v1_relat_1 (k2_ordinal6 X0))\wedge((v1_funct_1 (k2_ordinal6 X0))\wedge((v5_ordinal1 (k2_ordinal6 X0))\wedge((v1_ordinal2 (k2_ordinal6 X0))\wedge(v2_ordinal2 (k2_ordinal6 X0))))) \quad (6)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0 X0)\wedge(v1_classes2 X0))\Rightarrow((v1_relat_1 (k11_ordinal6 X0))\wedge((v1_funct_1 (k11_ordinal6 X0))\wedge((v5_ordinal1 (k11_ordinal6 X0))\wedge(v3_ordinal6 (k11_ordinal6 X0))))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k2_ordinal1 X0)\Leftrightarrow(\forall X2.(X2 \in X1)\Leftrightarrow((X2 \in X0)\wedge(v3_ordinal1 X2))) \quad (8)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge((v5_ordinal1 X0)\wedge(v1_ordinal2 X0))))\Rightarrow(k3_ordinal6 X0 = k2_ordinal6 (ReplSep (toset (\lambda X1 : \iota.m1_subset_1 X1 (k9_xtuple_0 X0)) (\lambda X1 : \iota.r1_abian X1 X0) (\lambda X1 : \iota.X1)))) \quad (9)$$

Assume the following.

$$\forall X0.k2_ordinal6 X0 = k3_wellord1 (k1_wellord2 (k1_ordinal6 X0)) (k1_wellord2 (k2_ordinal1 X0)) \quad (10)$$

Assume the following.

$$\forall X0.k1_ordinal6 X0 = k2_wellord2 (k1_wellord2 (k2_ordinal1 X0)) \quad (11)$$

Assume the following.

$$\forall X0.k1_ordinal1 X0 = k2_xboole_0 X0 (k1_tarski X0) \quad (12)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v1_xboole_0 X0) \wedge (v1_classes2 X0)) \Rightarrow (\forall X1. \\
& ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge ((v5_ordinal1 X1) \wedge (v3_ordinal6 \\
& X1)))) \Rightarrow ((X1 = k11_ordinal6 X0) \Leftrightarrow ((k9_xtuple_0 X1 = k2_ordinal1 \\
& X0) \wedge ((k1_funct_1 X1 k6_numbers = k6_ordinal6 X0 k4_ordinal1) \wedge \\
& ((\forall X2.(v3_ordinal1 X2) \Rightarrow ((k1_ordinal1 X2 \in k2_ordinal1 \\
& X0) \Rightarrow (k1_funct_1 X1 (k1_ordinal1 X2) = k3_ordinal6 (k1_funct_1 \\
& X1 X2)))) \wedge (\forall X2.((v3_ordinal1 X2) \wedge ((v4_ordinal1 X2) \wedge (\\
& \neg v1_xboole_0 X2))) \Rightarrow ((X2 \in k2_ordinal1 X0) \Rightarrow (k1_funct_1 X1 X2 = k7_ordinal6 \\
& (k5_relat_1 X1 X2))))))))))
\end{aligned} \tag{13}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v5_ordinal1 \\
& X0) \wedge ((v1_ordinal2 X0) \wedge ((v2_ordinal2 X0) \wedge (v3_ordinal2 X0)))))) \Rightarrow \\
& ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v5_ordinal1 X0) \wedge ((v1_ordinal2 \\
& X0) \wedge (v2_ordinal6 X0))))))
\end{aligned} \tag{14}$$

Assume the following.

$$\forall X0.(v1_classes2 X0) \Rightarrow ((v1_ordinal1 X0) \wedge (v2_classes1 X0)) \tag{15}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v1_xboole_0 X0) \wedge (v1_classes2 X0)) \Rightarrow (\forall X1. \\
& (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (k2_ordinal1 X0) (k2_ordinal1 \\
& X0)))) \Rightarrow (((v1_funct_1 X1) \wedge (v1_funct_2 X1 (k2_ordinal1 X0) (k2_ordinal1 \\
& X0))) \Rightarrow ((v5_ordinal1 X1) \wedge ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (k2_ordinal1 \\
& X0) (k2_ordinal1 X0)) \wedge (v1_ordinal2 X1))))))
\end{aligned} \tag{16}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(v3_ordinal1 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge \\
& (v1_classes2 X1)) \Rightarrow (((k4_ordinal1 \in X1) \wedge ((X0 \in X1) \wedge ((v1_funct_1 \\
& (k1_funct_1 (k11_ordinal6 X1) X0)) \wedge ((v1_funct_2 (k1_funct_1 \\
& (k11_ordinal6 X1) X0) (k2_ordinal1 X1) (k2_ordinal1 X1)) \wedge ((v2_ordinal6 \\
& (k1_funct_1 (k11_ordinal6 X1) X0)) \wedge (m1_subset_1 (k1_funct_1 \\
& (k11_ordinal6 X1) X0) (k1_zfmisc_1 (k2_zfmisc_1 (k2_ordinal1 \\
& X1) (k2_ordinal1 X1)))))))))) \Rightarrow ((v1_funct_1 (k1_funct_1 (k11_ordinal6 \\
& X1) (k1_ordinal1 X0)) \wedge ((v1_funct_2 (k1_funct_1 (k11_ordinal6 \\
& X1) (k1_ordinal1 X0) (k2_ordinal1 X1) (k2_ordinal1 X1)) \wedge ((v2_ordinal6 \\
& (k1_funct_1 (k11_ordinal6 X1) (k1_ordinal1 X0)) \wedge (m1_subset_1 \\
& (k1_funct_1 (k11_ordinal6 X1) (k1_ordinal1 X0) (k1_zfmisc_1 \\
& (k2_zfmisc_1 (k2_ordinal1 X1) (k2_ordinal1 X1))))))))))
\end{aligned}$$