

t13_ordinal5 (TMZyhXLBBR-
wQwdaB1SKNBNwziPidJ9bRP1A)

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Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $k1_ordinal5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $v5_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_ordinal2 : \iota \Rightarrow o$ be given. Let $k1_ordinal2 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_ordinal1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v4_ordinal1 : \iota \Rightarrow o$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_ordinal2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_ordinal2 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0 : \iota \Rightarrow \iota \Rightarrow \iota. \forall X1 : \iota \Rightarrow \iota \Rightarrow \iota. \forall X2. \forall X3 : \\
& \iota \Rightarrow \iota. ((\forall X4. v3_ordinal1 (X3 X4)) \wedge (v3_ordinal1 X2) \wedge \\
& ((\forall X4. \forall X5. v3_ordinal1 (X1 X4 X5)) \wedge (\forall X4. \forall X5. \\
& v3_ordinal1 (X0 X4 X5)))) \Rightarrow ((\forall X4. (v3_ordinal1 X4) \Rightarrow (\forall X5. \\
& (v3_ordinal1 X5) \Rightarrow ((X5 = X3 X4) \Leftrightarrow (\exists X6. ((v5_ordinal1 X6) \wedge \\
& ((v1_relat_1 X6) \wedge ((v1_funct_1 X6) \wedge (v1_ordinal2 X6)))) \wedge ((X5 = \\
& k1_ordinal2 X6) \wedge ((k9_xtuple_0 X6 = k1_ordinal1 X4) \wedge ((k1_funct_1 \\
& X6 k1_xboole_0 = X2) \wedge ((\forall X7. (v3_ordinal1 X7) \Rightarrow ((k1_ordinal1 \\
& X7 \in k1_ordinal1 X4) \Rightarrow (k1_funct_1 X6 (k1_ordinal1 X7) = X1 X7 (k1_funct_1 \\
& X6 X7)))) \wedge (\forall X7. (v3_ordinal1 X7) \Rightarrow (((X7 \in k1_ordinal1 X4) \wedge \\
& (v4_ordinal1 X7) \Rightarrow ((X7 = k1_xboole_0) \vee (k1_funct_1 X6 X7 = X0 X7 \\
& (k5_relat_1 X6 X7)))))))))) \Rightarrow (X3 k1_xboole_0 = X2))
\end{aligned} \tag{1}$$

Assume the following.

$$k6_numbers = k1_xboole_0 \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. ((v3_ordinal1 X0) \wedge (v3_ordinal1 X1)) \Rightarrow (v3_ordinal1 (k1_ordinal5 X0 X1)) \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v3_ordinal1\ X0) \Rightarrow (\forall X1.(v3_ordinal1\ X1) \Rightarrow (\forall X2. \\
& (v3_ordinal1\ X2) \Rightarrow ((X2 = k1_ordinal5\ X0\ X1) \Leftrightarrow (\exists X3. ((v1_relat_1 \\
& X3) \wedge ((v1_funct_1\ X3) \wedge ((v5_ordinal1\ X3) \wedge (v1_ordinal2\ X3)))))) \wedge \\
& ((X2 = k1_ordinal2\ X3) \wedge ((k9_xtuple_0\ X3 = k1_ordinal1\ X1) \wedge ((k1_funct_1 \\
& X3\ k1_xboole_0 = np_1) \wedge ((\forall X4.(v3_ordinal1\ X4) \Rightarrow ((k1_ordinal1 \\
& X4 \in k1_ordinal1\ X1) \Rightarrow (k1_funct_1\ X3\ (k1_ordinal1\ X4) = k12_ordinal2 \\
& X0\ (k1_funct_1\ X3\ X4)))))) \wedge (\forall X4.(v3_ordinal1\ X4) \Rightarrow (((X4 \in \\
& k1_ordinal1\ X1) \wedge (v4_ordinal1\ X4)) \Rightarrow ((X4 = k1_xboole_0) \vee (k1_funct_1 \\
& X3\ X4 = k8_ordinal2\ (k5_relat_1\ X3\ X4))))))))))
\end{aligned} \tag{4}$$

Theorem 1 $\forall X0.(v3_ordinal1\ X0) \Rightarrow (k1_ordinal5\ X0\ k6_numbers = np_1).$