

t47_ordinal6
(TMZ6nNx1CcdpVCQNEbB1ntbUjM1eHverhuS)

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Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v5_ordinal1 : \iota \Rightarrow o$ be given. Let $v3_ordinal6 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k7_ordinal6 : \iota \Rightarrow \iota$ be given. Let $r1_abian : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_ordinal6 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $v1_ordinal2 : \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k2_ordinal6 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v5_ordinal1 \\ & X0) \wedge (v3_ordinal6 X0)))) \Rightarrow (v1_ordinal6 (ReplSep (toset (\lambda X1 : \\ & \iota.m1_subset_1 X1 (k9_xtuple_0 (k1_funct_1 X0 k6_numbers)))) \\ & (\lambda X1 : \iota.(X1 \in k9_xtuple_0 (k1_funct_1 X0 k6_numbers)) \wedge (\forall X2. \\ & ((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge ((v5_ordinal1 X2) \wedge (v1_ordinal2 \\ & X2)))) \Rightarrow ((X2 \in k10_xtuple_0 X0) \Rightarrow (r1_abian X1 X2)))) (\lambda X1 : \iota. \\ & X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(v1_ordinal6 X0) \Rightarrow (k10_xtuple_0 (k2_ordinal6 X0) = X0) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v3_ordinal6 \\ & X0))) \Rightarrow ((v5_ordinal1 (k1_funct_1 X0 X1)) \wedge (v1_ordinal2 (k1_funct_1 \\ & X0 X1))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v3_ordinal6 \\ & X0))) \Rightarrow ((v1_relat_1 (k1_funct_1 X0 X1)) \wedge (v1_funct_1 (k1_funct_1 \\ & X0 X1))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v5_ordinal1 \\ X0) \wedge (v3_ordinal6 X0)))) \Rightarrow ((v1_relat_1 (k7_ordinal6 X0)) \wedge ((v1_funct_1 \\ (k7_ordinal6 X0)) \wedge ((v5_ordinal1 (k7_ordinal6 X0)) \wedge (v1_ordinal2 \\ (k7_ordinal6 X0))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.(X1 = \\ k10_xtuple_0 X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (\exists X3.(X3 \in k9_xtuple_0 \\ X0) \wedge (X2 = k1_funct_1 X0 X3)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v5_ordinal1 \\ X0) \wedge (v3_ordinal6 X0)))) \Rightarrow (k7_ordinal6 X0 = k2_ordinal6 (ReplSep \\ (toset (\lambda X1 : \iota.m1_subset_1 X1 (k9_xtuple_0 (k1_funct_1 X0 \\ k6_numbers)))) (\lambda X1 : \iota.(X1 \in k9_xtuple_0 (k1_funct_1 X0 k6_numbers)) \wedge \\ (\forall X2.((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge ((v5_ordinal1 \\ X2) \wedge (v1_ordinal2 X2)))) \Rightarrow ((X2 \in k10_xtuple_0 X0) \Rightarrow (r1_abian X1 \\ X2)))) (\lambda X1 : \iota.X1))) \end{aligned} \quad (7)$$

Theorem 1

$$\begin{aligned} \forall X0.(v3_ordinal1 X0) \Rightarrow (\forall X1.(v3_ordinal1 X1) \Rightarrow (\forall X2. \\ ((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge ((v5_ordinal1 X2) \wedge (v3_ordinal6 \\ X2)))) \Rightarrow (((X0 \in k9_xtuple_0 X2) \wedge (X1 \in k9_xtuple_0 (k7_ordinal6 \\ X2))) \Rightarrow (r1_abian (k1_funct_1 (k7_ordinal6 X2) X1) (k1_funct_1 \\ X2 X0)))))) \end{aligned}$$