t42_ordinal5 (TMS2maPBmFEyE89F4NKf8kz3RJvE4eKQdKN)

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Let $v3\_ordinal1 : \iota \Rightarrow o$ be given. Let $k3\_ordinal5 : \iota \Rightarrow \iota$ be given. Let $k1\_ordinal1 : \iota \Rightarrow \iota$ be given. Let $k1\_ordinal5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_ordinal1 : \iota$ 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 $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k8\_ordinal2 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0 : \iota \Rightarrow \iota . \forall X1 : \iota \Rightarrow \iota \Rightarrow \iota . \forall X2 : \iota \Rightarrow \iota \Rightarrow \iota . \forall X3 . ((v3\_ordinal1\ X3) \wedge ((\forall X4 . \forall X5 . v3\_ordinal1\ (X2\ X4\ X5)) \wedge ((\forall X4 . \forall X5 . v3\_ordinal1\ (X1\ X4\ X5)) \wedge (\forall X4 . v3\_ordinal1\ (X0\ X4))))) \Rightarrow ((\forall X4 . (v3\_ordinal1\ X4) \Rightarrow (\forall X5 . (v3\_ordinal1\ X5) \Rightarrow ((X5 = X0\ X4) \Leftrightarrow (\exists X6 . ((v5\_ordinal1\ X6) \wedge ((v1\_relat\_1\ X6) \wedge ((v1\_funct\_1\ X6) \wedge (v1\_ordinal2\ X6)))) \wedge ((X5 = k1\_ordinal2\ X6) \wedge ((k9\_xtuple\_0\ X6 = k1\_ordinal1\ X4) \wedge ((k1\_funct\_1\ X6\ k1\_xboole\_0 = X3) \wedge ((\forall X7 . (v3\_ordinal1\ X7) \Rightarrow ((k1\_ordinal1\ X7 \in k1\_ordinal1\ X4) \Rightarrow (k1\_funct\_1\ X6\ (k1\_ordinal1\ X7) = X2\ X7\ (k1\_funct\_1\ X6\ X7)))) \wedge (\forall X7 . (v3\_ordinal1\ X7) \Rightarrow (((X7 \in k1\_ordinal1\ X4) \wedge (v4\_ordinal1\ X7)) \Rightarrow ((X7 = k1\_xboole\_0) \vee (k1\_funct\_1\ X6\ X7 = X1\ X7\ (k5\_relat\_1\ X6\ X7)))))))))))) \Rightarrow (\forall X4 . (v3\_ordinal1\ X4) \Rightarrow (X0\ (k1\_ordinal1\ X4) = X2\ X4\ (X0\ X4))))) \tag{1}$$

Assume the following.

$$\forall X0.(v3\_ordinal1\ X0)\Rightarrow(\forall X1.(v3\_ordinal1\ X1)\Rightarrow((X1 = k3\_ordinal5\ X0)\Leftrightarrow(\exists X2.((v1\_relat\_1\ X2)\wedge((v1\_funct\_1\ X2)\wedge((v5\_ordinal1\ X2)\wedge(v1\_ordinal2\ X2))))\wedge((X1 = k1\_ordinal2\ X2)\wedge((k9\_xtuple\_0\ X2 = k1\_ordinal1\ X0)\wedge((k1\_funct\_1\ X2\ k1\_xboole\_0 = k1\_ordinal5\ k4\_ordinal1\ k4\_ordinal1)\wedge((\forall X3.(v3\_ordinal1\ X3)\Rightarrow((k1\_ordinal1\ X3 \in k1\_ordinal1\ X0)\Rightarrow(k1\_funct\_1\ X2\ (k1\_ordinal1\ X3) = k1\_ordinal5\ (k1\_funct\_1\ X2\ X3)\ k4\_ordinal1)))\wedge(\forall X3.(v3\_ordinal1\ X3)\Rightarrow(((X3 \in k1\_ordinal1\ X0)\wedge(v4\_ordinal1\ X3))\Rightarrow((X3 = k1\_xboole\_0)\vee(k1\_funct\_1\ X2\ X3 = k8\_ordinal2\ (k5\_relat\_1\ X2\ X3))))))))))) \tag{2}$$

Theorem 1

$$\forall X0.(v3\_ordinal1\ X0)\Rightarrow(k3\_ordinal5\ (k1\_ordinal1\ X0) = k1\_ordinal5\ (k3\_ordinal5\ X0)\ k4\_ordinal1)$$