

t109_funct_4

(TMN3GYToWJLNqGgtM8ULfcCZmpknpZyH4bh)

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Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_ordinal1 : \iota \Rightarrow \iota$ be given. Let $k2_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarSKI : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_tarSKI : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (k9_xtuple_0 (k2_funcop_1 X0 X1) = X0) \wedge (r1_tarSKI (k10_xtuple_0 (k2_funcop_1 X0 X1)) (k1_tarSKI X1)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. k7_funcop_1 X0 X1 = k2_funcop_1 X0 X1 \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 (k2_funcop_1 X0 X1)) \wedge ((v4_relat_1 (k2_funcop_1 X0 X1) X0) \wedge ((v1_funct_1 (k2_funcop_1 X0 X1)) \wedge (v1_partfun1 (k2_funcop_1 X0 X1) X0))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 (k16_funcop_1 X0 X1)) \wedge (v1_funct_1 (k16_funcop_1 X0 X1)) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (v1_funct_1 (k7_funcop_1 X0 X1)) \wedge ((v1_funct_2 (k7_funcop_1 X0 X1) X0 (k1_tarSKI X1)) \wedge (m1_subset_1 (k7_funcop_1 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 X0 (k1_tarSKI X1)))))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1 X0)\wedge(v1_funct_1 X0))\wedge((v1_relat_1 X1)\wedge(v1_funct_1 X1)))\Rightarrow((v1_relat_1 (k1_funct_4 X0 X1))\wedge(v1_funct_1 (k1_funct_4 X0 X1))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.k16_funcop_1 X0 X1 = k7_funcop_1 (k1_tarski X0) X1 \quad (7)$$

Assume the following.

$$\forall X0.k1_ordinal1 X0 = k2_xboole_0 X0 (k1_tarski X0) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0)\wedge(v1_funct_1 X0))\Rightarrow(\forall X1.((v1_relat_1 X1)\wedge(v1_funct_1 X1))\Rightarrow(\forall X2.((v1_relat_1 X2)\wedge(v1_funct_1 X2))\Rightarrow((X2 = k1_funct_4 X0 X1)\Leftrightarrow((k9_xtuple_0 X2 = k2_xboole_0 (k9_xtuple_0 X0) (k9_xtuple_0 X1))\wedge(\forall X3.(X3 \in k2_xboole_0 (k9_xtuple_0 X0) (k9_xtuple_0 X1))\Rightarrow(((X3 \in k9_xtuple_0 X1)\Rightarrow(k1_funct_1 X2 X3 = k1_funct_1 X1 X3))\wedge((\neg X3 \in k9_xtuple_0 X1)\Rightarrow(k1_funct_1 X2 X3 = k1_funct_1 X0 X3)))))))))) \end{aligned} \quad (9)$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.k9_xtuple_0 (k1_funct_4 (k7_funcop_1 X1 X2) (k16_funcop_1 X1 X0)) = k1_ordinal1 X1$$