

t5_abian
(TMHZ8M5n3CWurBen7e1wGuFkzMKbA77oW6G)

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Let $v1_funct_1 : \iota \Rightarrow o$ 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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_abian : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_abian : \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_setfam_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_tarski : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_abian : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 X0 X0) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))) \Rightarrow (k1_relset_1 \\ & X0 X1 = X0) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 \\ & X0))) \Rightarrow ((v3_abian X1 (k1_zfmisc_1 (k1_zfmisc_1 X0))) \Leftrightarrow (k5_setfam_1 \\ & X0 X1 = X0)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (\neg(\neg r1_xboole_0 X0 X1) \wedge (\forall X2. \neg(X2 \in \\ & X0) \wedge (X2 \in X1))) \wedge (\neg(\exists X2. (X2 \in X0) \wedge (X2 \in X1)) \wedge (r1_xboole_0 \\ & X0 X1)) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0)))\Rightarrow(k5_setfam_1 X0 X1 = k3_tarski X1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v4_relat_1 X1 X0))\Rightarrow(k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (7)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge(v1_funct_1 X0))\Rightarrow(\forall X1.\forall X2.(X2 = k7_relat_1 X0 X1)\Leftrightarrow(\forall X3.(X3 \in X2)\Leftrightarrow(\exists X4.(X4 \in k9_xtuple_0 X0)\wedge((X4 \in X1)\wedge(X3 = k1_funct_1 X0 X4)))) \quad (8)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge(v1_funct_1 X0))\Rightarrow((v2_abian X0)\Leftrightarrow(\exists X1.r1_abian X1 X0)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k3_tarski X0)\Leftrightarrow(\forall X2.(X2 \in X1)\Leftrightarrow(\exists X3.(X2 \in X3)\wedge(X3 \in X0))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v1_funct_1 X1))\Rightarrow((r1_abian X0 X1)\Leftrightarrow((X0 \in k9_xtuple_0 X1)\wedge(X0 = k1_funct_1 X1 X0))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \quad (12)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(v1_xboole_0 X1)) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (14)$$

Theorem 1

$$\forall X0.\forall X1.((v1_funct_1 X1)\wedge((v1_funct_2 X1 X0 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))))\Rightarrow(\forall X2.((\neg v1_xboole_0 X2)\wedge((v3_abian X2 (k1_zfmisc_1 (k1_zfmisc_1 X0))))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k1_zfmisc_1 X0))))\Rightarrow(\neg(\forall X3.(m2_subset_1 X3 (k1_zfmisc_1 X0) X2)\Rightarrow(r1_xboole_0 X3 (k7_relat_1 X1 X3))))\wedge(v2_abian X1)))$$