

t9_ens_1 (TMZCtGMbtXN- RvBBhe375PGW1qz3gVpFr6Ns)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_ens_1 : \iota \Rightarrow \iota$ be given. Let $k4_ens_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k3_ens_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k2_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_ens_1 : \iota \Rightarrow \iota$ be given. Let $k1_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_funct_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k2_ens_1 \\ X0)) \Rightarrow (X1 = k4_tarski (k1_domain_1 X0 X0 (k3_ens_1 X0 X1) (k4_ens_1 \\ X0 X1)) (k2_xtuple_0 X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (k2_ens_1 \\ X0)) \Rightarrow (\exists X2. (m1_subset_1 X2 (k1_ens_1 X0)) \wedge (\exists X3. \\ (m1_subset_1 X3 X0) \wedge (\exists X4. (m1_subset_1 X4 X0) \wedge ((X1 = k1_domain_1 \\ (k2_zfmisc_1 X0 X0) (k1_ens_1 X0) (k1_domain_1 X0 X0 X3 X4) X2) \wedge \\ ((X4 = k1_xboole_0) \Rightarrow (X3 = k1_xboole_0)) \wedge ((v1_funct_1 X2) \wedge ((v1_funct_2 \\ X2 X3 X4) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X3 X4)))))))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\ ((\neg v1_xboole_0 X1) \wedge ((m1_subset_1 X2 X0) \wedge (m1_subset_1 X3 X1)))) \Rightarrow \\ (k1_domain_1 X0 X1 X2 X3 = k4_tarski X2 X3) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. k2_xtuple_0 (k4_tarski X0 X1) = X1 \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. k1_xtuple_0 (k4_tarski X0 X1) = X0 \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X1 (k2_ens_1 X0)))\Rightarrow((v1_relat_1 (k2_xtuple_0 X1))\wedge(v1_funct_1 (k2_xtuple_0 X1))) \quad (6)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0)\Rightarrow((v4_funct_1 (k1_ens_1 X0))\wedge(\neg v1_xboole_0 (k1_ens_1 X0))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(\neg v1_xboole_0 X1))\Rightarrow(\neg v1_xboole_0 (k2_zfmisc_1 X0 X1)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X1 (k2_ens_1 X0)))\Rightarrow(m1_subset_1 (k4_ens_1 X0 X1) X0) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X1 (k2_ens_1 X0)))\Rightarrow(m1_subset_1 (k3_ens_1 X0 X1) X0) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge((m1_subset_1 X2 X0)\wedge(m1_subset_1 X3 X1))))\Rightarrow(m1_subset_1 (k1_domain_1 X0 X1 X2 X3) (k2_zfmisc_1 X0 X1)) \quad (11)$$

Theorem 1

$$\forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k2_ens_1 X0))\Rightarrow((\neg(k4_ens_1 X0 X1 = k1_xboole_0)\wedge(k3_ens_1 X0 X1\neq k1_xboole_0))\wedge((v1_funct_1 (k2_xtuple_0 X1))\wedge((v1_funct_2 (k2_xtuple_0 X1) (k3_ens_1 X0 X1) (k4_ens_1 X0 X1))\wedge(m1_subset_1 (k2_xtuple_0 X1) (k1_zfmisc_1 (k2_zfmisc_1 (k3_ens_1 X0 X1) (k4_ens_1 X0 X1))))))))))$$