

t55_ec_pf_1

(TMcxVxwkkFj7px3EJnqpnExPVcfqTLPCCM9)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_relat_2 : \iota \Rightarrow o$ be given. Let $v8_relat_2 : \iota \Rightarrow o$ 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 $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_eqrel_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $v1_prob_2 : \iota \Rightarrow o$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_eqrel_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_eqrel_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_setfam_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. r1_xboole_0 X0 k1_xboole_0 \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v5_relat_1 X1 X0) \wedge (v1_funct_1 X1))) \Rightarrow (\forall X2. (X2 \in k9_xtuple_0 X1) \Rightarrow (k1_funct_1 X1 X2 \in X0)) \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. (r1_xboole_0 X0 X1) \Rightarrow (r1_xboole_0 X1 X0) \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. ((v3_relat_2 X1) \wedge ((v8_relat_2 X1) \wedge ((v1_partfun1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))))) \Rightarrow (k8_eqrel_1 X0 X1 = k7_eqrel_1 X0 X1) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v3_relat_2 X1)\wedge((v8_relat_2 X1)\wedge((v1_partfun1 X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))))))\Rightarrow (6) \\ (m1_eqrel_1 (k8_eqrel_1 X0 X1) X0)$$

Assume the following.

$$\forall X0.\forall X1.((v3_relat_2 X1)\wedge((v8_relat_2 X1)\wedge((v1_partfun1 X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))))))\Rightarrow (7) \\ (m1_subset_1 (k7_eqrel_1 X0 X1) (k1_zfmisc_1 (k1_zfmisc_1 X0)))$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge(v1_funct_1 X0))\Rightarrow((v2_funct_1 X0)\Leftrightarrow (8) \\ (\forall X1.\forall X2.((X1 \in k9_xtuple_0 X0)\wedge((X2 \in k9_xtuple_0 X0)\wedge(k1_funct_1 X0 X1 = k1_funct_1 X0 X2))))\Rightarrow(X1 = X2))$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0)))\Rightarrow((m1_eqrel_1 X1 X0)\Leftrightarrow((k5_setfam_1 X0 X1 = X0)\wedge(\forall X2. (9) \\ (m1_subset_1 X2 (k1_zfmisc_1 X0))\Rightarrow((X2 \in X1)\Rightarrow((X2\neq k1_xboole_0)\wedge (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 X0))\Rightarrow(\neg(X3 \in X1)\wedge((X2\neq X3)\wedge(\neg r1_xboole_0 X2 X3))))))))))$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge(v1_funct_1 X0))\Rightarrow((v1_prob_2 X0)\Leftrightarrow (10) \\ (\forall X1.\forall X2.(X1\neq X2)\Rightarrow(r1_xboole_0 (k1_funct_1 X0 X1) (k1_funct_1 X0 X2))))$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge(v1_funct_1 X0))\Rightarrow(\forall X1.\forall X2. (11) \\ ((X1 \in k9_xtuple_0 X0)\Rightarrow((X2 = k1_funct_1 X0 X1)\Leftrightarrow(k4_tarski X1 X2 \in X0)))\wedge((\neg X1 \in k9_xtuple_0 X0)\Rightarrow((X2 = k1_funct_1 X0 X1)\Leftrightarrow(X2 = k1_xboole_0))))$$

Theorem 1

$$\forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((v1_partfun1 X1 X0)\wedge (v3_relat_2 X1)\wedge((v8_relat_2 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))))))\Rightarrow(\forall X2.((v1_relat_1 X2)\wedge((v5_relat_1 X2 (k8_eqrel_1 X0 X1)\wedge(v1_funct_1 X2))\Rightarrow((v2_funct_1 X2)\Rightarrow(v1_prob_2 X2))))))$$