

t3_pralg_3

(TMHLEbt8xtx1ex2FS3xYp4eGTrf9FzUxUP9)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_relat_2 : \iota \Rightarrow o$ be given. Let $v8_relat_2 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_eqrel_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_eqrel_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_eqrel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_eqrel_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v3_relat_2 X1) \wedge (v8_relat_2 X1) \wedge ((v1_partfun1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))))) \Rightarrow (\neg v1_xboole_0 (k8_eqrel_1 X0 X1))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v3_relat_2 X2) \wedge ((v8_relat_2 X2) \wedge ((v1_partfun1 X2 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 X1)))))) \Rightarrow (\neg (X0 \in k7_eqrel_1 X1 X2) \wedge (\forall X3.(m1_subset_1 X3 X1) \Rightarrow (X0 \neq k6_eqrel_1 X1 X1 X2 X3))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v3_relat_2 X2) \wedge ((v8_relat_2 X2) \wedge ((v1_partfun1 X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))))) \Rightarrow (\forall X3.(X3 \in X0) \Rightarrow ((X1 \in k6_eqrel_1 X0 X0 X2 X3) \Leftrightarrow (k6_eqrel_1 X0 X0 X2 X3 = k6_eqrel_1 X0 X0 X2 X1))) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v3_relat_2 X1)\wedge((v8_relat_2 X1)\wedge((v1_partfun1 X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))))))\Rightarrow (k8_eqrel_1 X0 X1 = k7_eqrel_1 X0 X1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(m1_eqrel_1 X1 X0)\Rightarrow(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v3_relat_2 X1)\wedge((v8_relat_2 X1)\wedge((v1_partfun1 X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))))))\Rightarrow (m1_eqrel_1 (k8_eqrel_1 X0 X1) X0) \quad (8)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(v1_xboole_0 X1)) \quad (9)$$

Theorem 1

$$\forall X0.\forall X1.(\neg v1_xboole_0 X1)\Rightarrow(\forall X2.((v3_relat_2 X2)\wedge((v8_relat_2 X2)\wedge((v1_partfun1 X2 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 X1))))))\Rightarrow(\forall X3.(m2_subset_1 X3 (k1_zfmisc_1 X1) (k8_eqrel_1 X1 X2))\Rightarrow(\forall X4.(m2_subset_1 X4 (k1_zfmisc_1 X1) (k8_eqrel_1 X1 X2))\Rightarrow(((X0 \in X3)\wedge(X0 \in X4))\Rightarrow(X3 = X4))))))$$