

t43_mmlquery

(TMPMRZw7nhRjUF5t5psXKC1izJeeK65NWJi)

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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 $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k18_mmlquery : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k20_mmlquery : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k19_mmlquery : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X2 X2))) \Rightarrow ((k4_tarski X0 X1 \in k18_mmlquery X2 X3) \Leftrightarrow ((X0 = X1) \wedge ((X0 \in X2) \wedge (\neg X0 \in k1_relset_1 X2 X3)))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(v1_relat_1 X1) \Rightarrow (k9_xtuple_0 (k2_xboole_0 X0 X1) = k2_xboole_0 (k9_xtuple_0 X0) (k9_xtuple_0 X1))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow ((r2_relset_1 X0 X1 X2 X3) \Leftrightarrow (X2 = X3)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))) \Rightarrow (k20_mmlquery X0 X1 X2 = k2_xboole_0 X1 X2) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))))\Rightarrow(k19_mmlquery X0 X1 X2 = k3_xboole_0 X1 X2) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))))\Rightarrow(m1_subset_1 (k20_mmlquery X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))))\Rightarrow(m1_subset_1 (k19_mmlquery X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))\Rightarrow(m1_subset_1 (k18_mmlquery X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k3_xboole_0 X0 X1)\Leftrightarrow(\forall X3.(X3 \in X2)\Leftrightarrow((X3 \in X0)\wedge(X3 \in X1))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2_xboole_0 X0 X1)\Leftrightarrow(\forall X3.(X3 \in X2)\Leftrightarrow((X3 \in X0)\vee(X3 \in X1))) \quad (11)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0)\Rightarrow(\forall X1.(v1_relat_1 X1)\Rightarrow((X0 = X1)\Leftrightarrow(\forall X2.\forall X3.(k4_tarski X2 X3 \in X0)\Leftrightarrow(k4_tarski X2 X3 \in X1)))) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))))\Rightarrow(k20_mmlquery X0 X1 X2 = k20_mmlquery X0 X2 X1) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (15)$$

Theorem 1

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))\Rightarrow(r2_relset_1 X0 X0 (k18_mmlquery X0 (k20_mmlquery X0 X1 X2)) (k19_mmlquery X0 (k18_mmlquery X0 X1) (k18_mmlquery X0 X2))))$$