

t66_mmlquery (TMaPeAtDKiVs- RTtgR2Br5Lr4AEF6bWsqiNM)

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Let $l1_mmlquery : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k30_mmlquery : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k31_mmlquery : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_relat_1 : \iota \Rightarrow \iota$ be given. Let $k1_mmlquery : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2_mmlquery : \iota \Rightarrow \iota$ be given. Let $u1_mmlquery : \iota \Rightarrow \iota$ be given. Let $k29_mmlquery : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (v1_relat_1 X2) \Rightarrow ((k4_tarski X0 X1 \in X2) \Leftrightarrow (X1 \in k9_relat_1 X2 X0)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (k3_relset_1 X0 X1 X2 = k2_relat_1 X2) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))) \wedge (m1_subset_1 X2 X0)) \Rightarrow (k1_mmlquery X0 X1 X2 = k9_relat_1 X1 X2) \quad (3)$$

Assume the following.

$$\forall X0. (l1_mmlquery X0) \Rightarrow (m1_subset_1 (u2_mmlquery X0) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_mmlquery X0)))) \quad (4)$$

Assume the following.

$$\forall X0. (l1_mmlquery X0) \Rightarrow (m1_subset_1 (u1_mmlquery X0) (k1_zfmisc_1 (u1_struct_0 X0))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(m1_subset_1 (k3_relset_1 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 X1 X0))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k1_zfmisc_1 X0))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow(m1_subset_1 (k29_mmlquery X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))) \quad (7)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0)\Rightarrow(\forall X1.(v1_relat_1 X1)\Rightarrow((X1 = k2_relat_1 X0)\Leftrightarrow(\forall X2.\forall X3.(k4_tarski X2 X3 \in X1)\Leftrightarrow(k4_tarski X3 X2 \in X0)))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \quad (9)$$

Assume the following.

$$\forall X0.(l1_mmlquery X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(k31_mmlquery X0 X1 = k1_mmlquery (u1_struct_0 X0) (k3_relset_1 (u1_struct_0 X0) (u1_struct_0 X0) (k29_mmlquery (u1_struct_0 X0) (u1_mmlquery X0) (u2_mmlquery X0)))) X1)) \quad (10)$$

Assume the following.

$$\forall X0.(l1_mmlquery X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(k30_mmlquery X0 X1 = k1_mmlquery (u1_struct_0 X0) (k29_mmlquery (u1_struct_0 X0) (u1_mmlquery X0) (u2_mmlquery X0)) X1)) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(k29_mmlquery X0 X1 X2 = X2)) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.k2_tarski X0 X1 = k2_tarski X1 X0 \quad (13)$$

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

$$\begin{aligned} \forall X0.(l1_mmlquery\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (u1_struct_0 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (u1_struct_0\ X0)) \Rightarrow ((X1 \in k30_mmlquery \\ X0\ X2) \Leftrightarrow (X2 \in k31_mmlquery\ X0\ X1)))) \end{aligned}$$