

t49_mmlquery (TM- PCWwr6FmouEtBsnjzHJYT5dsdGmwhS7zm)

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Let $v1_mmlquery : \iota \Rightarrow \iota \Rightarrow o$ 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 $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k18_mmlquery : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k19_mmlquery : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k20_mmlquery : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. ((v1_mmlquery X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))) \Rightarrow (r2_relset_1 X0 X0 (k18_mmlquery X0 (k18_mmlquery X0 X1)) X1) \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))) \Rightarrow (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))) \Rightarrow (r2_relset_1 X0 X0 (k18_mmlquery X0 (k20_mmlquery X0 X1 X2)) (k19_mmlquery X0 (k18_mmlquery X0 X1) (k18_mmlquery X0 X2)))) \tag{2}$$

Assume the following.

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

Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))) \Rightarrow (k19_mmlquery X0 X1 X2 = k3_xboole_0 X1 X2) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1_mmlquery\ X1\ X0)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X0))))\wedge((v1_mmlquery\ X2\ X0)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X0))))\Rightarrow(v1_mmlquery\ (k2_xboole_0\ X1\ X2)\ X0)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X0))\Rightarrow(v1_mmlquery\ (k18_mmlquery\ X0\ X1)\ X0)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X0))\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X0))))\Rightarrow(m1_subset_1\ (k20_mmlquery\ X0\ X1\ X2)\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X0)))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X0))\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X0))))\Rightarrow(m1_subset_1\ (k19_mmlquery\ X0\ X1\ X2)\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X0)))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X0))\Rightarrow(m1_subset_1\ (k18_mmlquery\ X0\ X1)\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X0)))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X0))\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X0))))\Rightarrow(k20_mmlquery\ X0\ X1\ X2 = k20_mmlquery\ X0\ X2\ X1)) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X0))\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X0))))\Rightarrow(k19_mmlquery\ X0\ X1\ X2 = k19_mmlquery\ X0\ X2\ X1)) \quad (12)$$

Theorem 1

$$\forall X0.\forall X1.((v1_mmlquery\ X1\ X0)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X0))))\Rightarrow(\forall X2.((v1_mmlquery\ X2\ X0)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X0))))\Rightarrow(r2_relset_1\ X0\ X0\ (k18_mmlquery\ X0\ (k19_mmlquery\ X0\ X1\ X2))\ (k20_mmlquery\ X0\ (k18_mmlquery\ X0\ X1)\ (k18_mmlquery\ X0\ X2))))$$