

t50\_mmlquery  
(TMYhr26NhyLR89SKH6ain9H3asrEPEXGp8j)

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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  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k20\_mmlquery : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k18\_mmlquery : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_relat\_1 : \iota \Rightarrow \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(k9\_xtuple\_0 (k4\_relat\_1 X0) = X0) \wedge (k10\_xtuple\_0 (k4\_relat\_1 X0) = X0) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarski X0 X1) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.k2\_xboole\_0 X0 (k4\_xboole\_0 X1 X0) = k2\_xboole\_0 X0 X1 \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0))) \Rightarrow (k18\_mmlquery X0 X1 = k4\_relat\_1 (k6\_subset\_1 X0 (k1\_relset\_1 X0 X1))) \quad (4)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 X0) \Rightarrow (\forall X1.(v1\_relat\_1 X1) \Rightarrow (k9\_xtuple\_0 (k2\_xboole\_0 X0 X1) = k2\_xboole\_0 (k9\_xtuple\_0 X0) (k9\_xtuple\_0 X1))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski X0 X1) \Rightarrow (k2\_xboole\_0 X0 X1 = X1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.k6\_subset\_1 X0 X1 = k4\_xboole\_0 X0 X1 \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X0))) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 X0)))) \Rightarrow (k20\_mmlquery X0 X1 X2 = k2\_xboole\_0 X1 X2) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1) \wedge (v4\_relat\_1 X1 X0)) \Rightarrow (k1\_relset\_1 X0 X1 = k9\_xtuple\_0 X1) \quad (9)$$

Assume the following.

$$\forall X0.v1\_relat\_1 (k4\_relat\_1 X0) \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X0))) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 X0)))) \Rightarrow (m1\_subset\_1 (k20\_mmlquery X0 X1 X2) (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 X0))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1) \wedge (v4\_relat\_1 X1 X0)) \Rightarrow (m1\_subset\_1 (k1\_relset\_1 X0 X1) (k1\_zfmisc\_1 X0)) \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 X0))) \Rightarrow (m1\_subset\_1 (k18\_mmlquery X0 X1) (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 X0))) \end{aligned} \quad (13)$$

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**

$$\begin{aligned} & \forall X0.\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 X0))) \Rightarrow (k1\_relset\_1 X0 (k20\_mmlquery X0 X1 (k18\_mmlquery X0 X1)) = \\ & X0) \end{aligned}$$