

# t51\_relset\_2 (TMWcMoWCyRoUZwCJdCpeTQx- HcoTZMNB4usY)

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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  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k7\_relset\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $k2\_relat\_1 : \iota \Rightarrow \iota$  be given. Let  $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X1 X0))) \Rightarrow ((k9\_xtuple\_0 X2 = k7\_relset\_1 X0 X1 (k3\_relset\_1 \\ & X1 X0 X2) X0) \wedge (k10\_xtuple\_0 X2 = k7\_relset\_1 X1 X0 X2 X1)) \end{aligned} \quad (1)$$

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.

$$\forall X0. (v1\_relat\_1 X0) \Rightarrow (\forall X1. (v1\_relat\_1 X1) \Rightarrow (k2\_relat\_1 (k3\_relat\_1 X0 X1) = k3\_relat\_1 (k2\_relat\_1 X1) (k2\_relat\_1 X0))) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (v1\_relat\_1 X1) \Rightarrow (\forall X2. (v1\_relat\_1 \\ & X2) \Rightarrow (k7\_relat\_1 (k3\_relat\_1 X1 X2) X0 = k7\_relat\_1 X2 (k7\_relat\_1 \\ & X1 X0))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (v1\_relat\_1 X2) \Rightarrow ((r1\_tarski X0 X1) \Rightarrow (r1\_tarski (k7\_relat\_1 X2 X0) (k7\_relat\_1 X2 X1))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\wedge(m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X1 X2))))\Rightarrow(k7\_relset\_2 X0 X1 X2 X3 X4 = k3\_relat\_1 X3 X4) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(k7\_relset\_1 X0 X1 X2 X3 = k7\_relat\_1 X2 X3) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(k3\_relset\_1 X0 X1 X2 = k2\_relat\_1 X2) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\wedge(m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X1 X2))))\Rightarrow(m1\_subset\_1 (k7\_relset\_2 X0 X1 X2 X3 X4) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X2))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(m1\_subset\_1 (k7\_relset\_1 X0 X1 X2 X3) (k1\_zfmisc\_1 X1)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(m1\_subset\_1 (k3\_relset\_1 X0 X1 X2) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X1 X0))) \quad (11)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 X0)\Rightarrow(v1\_relat\_1 (k2\_relat\_1 X0)) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \quad (13)$$

**Theorem 1**

$$\forall X0.\forall X1.\forall X2.\forall X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(\forall X4.(m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X1 X2)))\Rightarrow((k9\_xtuple\_0 (k7\_relset\_2 X0 X1 X2 X3 X4) = k7\_relset\_1 X1 X0 (k3\_relset\_1 X0 X1 X3) (k9\_xtuple\_0 X4))\wedge(r1\_tarski (k9\_xtuple\_0 (k7\_relset\_2 X0 X1 X2 X3 X4) (k9\_xtuple\_0 X3))))$$