

t9\_taxonom1  
(TMG9G9tmaNHToPAxqNGdghV9tJKZJbjQJLr)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  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  $r1\_relat\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r3\_relat\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k13\_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_relat\_2 : \iota \Rightarrow o$  be given. Let  $v8\_relat\_2 : \iota \Rightarrow o$  be given. Let  $r8\_relat\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k18\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_relat\_1 : \iota \Rightarrow \iota$  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.

$$\forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0))) \Rightarrow ((r1\_relat\_2 X1 X0) \Rightarrow (r8\_relat\_2 (k18\_finseq\_1 X1) X0)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0))) \Rightarrow ((r3\_relat\_2 X1 X0) \Rightarrow (r3\_relat\_2 (k18\_finseq\_1 X1) X0)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0))) \Rightarrow ((r1\_relat\_2 X1 X0) \Rightarrow (r1\_relat\_2 (k18\_finseq\_1 X1) X0)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0))) \Rightarrow ((r1\_relat\_2 X1 X0) \Rightarrow ((k1\_relset\_1 X0 X1 = X0) \wedge (k1\_relat\_1 X1 = X0))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0)))) \Rightarrow (k13\_lang1 X0 X1 = k18\_finseq\_1 X1) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0)))) \Rightarrow (m1\_subset\_1 (k13\_lang1 X0 X1) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1)\wedge(v4\_relat\_1 X1 X0))\Rightarrow( (v1\_partfun1 X1 X0)\Leftrightarrow(k1\_relset\_1 X0 X1 = X0)) \quad (7)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 X0)\Rightarrow((v8\_relat\_2 X0)\Leftrightarrow(r8\_relat\_2 X0 (k1\_relat\_1 X0))) \quad (8)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 X0)\Rightarrow((v3\_relat\_2 X0)\Leftrightarrow(r3\_relat\_2 X0 (k1\_relat\_1 X0))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow((v4\_relat\_1 X2 X0)\wedge(v5\_relat\_1 X2 X1)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \quad (11)$$

**Theorem 1**

$$\begin{aligned} \forall X0.(\neg v1\_xboole\_0 X0)\Rightarrow(\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0)))\Rightarrow(((r1\_relat\_2 X1 X0)\wedge(r3\_relat\_2 X1 X0))\Rightarrow \\ ((v1\_partfun1 (k13\_lang1 X0 X1) X0)\wedge((v3\_relat\_2 (k13\_lang1 X0 X1))\wedge((v8\_relat\_2 (k13\_lang1 X0 X1))\wedge(m1\_subset\_1 (k13\_lang1 X0 X1) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0)))))))) \end{aligned}$$