

l98\_toprealb  
(TMQdtKZMVMw8HoMS24gMufRBBz7fmGba8UF)

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Let  $k1\_relset.1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_struct.0 : \iota \Rightarrow \iota$  be given. Let  $k1\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_topalg.2 : \iota$  be given. Let  $k5\_toprealb : \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k1\_fcont.1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_real.1 : \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_relset.1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_toprealb : \iota \Rightarrow \iota$  be given. Let  $k2\_rcomp.1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $v1\_xboole.0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole.0 : \iota$  be given. Let  $v1\_relat.1 : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_xtuple.0 : \iota \Rightarrow \iota$  be given. Let  $k5\_relat.1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_subset.1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc.1 : \iota \Rightarrow \iota$  be given. Let  $v2\_xxreal.0 : \iota \Rightarrow o$  be given. Let  $m2\_subset.1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v1\_funct.1 : \iota \Rightarrow o$  be given. Let  $k2\_zfmisc.1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v4\_relat.1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_xcmplx.0 : \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx.0 : \iota \Rightarrow o$  be given. Let  $v1\_xxreal.0 : \iota \Rightarrow o$  be given. Let  $v1\_xreal.0 : \iota \Rightarrow o$  be given. Let  $v1\_funct.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_fcont.1 : \iota \Rightarrow o$  be given. Let  $v5\_relat.1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xboole.0 X0) \Rightarrow (X0 = k1\_xboole.0) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat.1 X1) \Rightarrow ((r1\_tarski X0 (k9\_xtuple.0 X1)) \Rightarrow (k9\_xtuple.0 (k5\_relat.1 X1 X0) = X0)) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset.1 X0 (k1\_zfmisc.1 X1)) \Leftrightarrow (r1\_tarski X0 X1) \quad (3)$$

Assume the following.

$$((v2\_xxreal.0 np\_1) \wedge (m2\_subset.1 np\_1 k1\_numbers k5\_numbers)) \wedge ((m1\_subset.1 np\_1 k5\_numbers) \wedge (m1\_subset.1 np\_1 k1\_numbers)) \quad (4)$$

Assume the following.

$$k6\_numbers = k1\_xboole.0 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1 X2)\wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))))\Rightarrow(k2\_partfun1 X0 X1 X2 X3 = k5\_relat\_1 X2 X3) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1)\wedge(v4\_relat\_1 X1 X0))\Rightarrow(k1\_relset\_1 X0 X1 = k9\_xtuple\_0 X1) \quad (7)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers)\Rightarrow(k1\_real\_1 X0 = k4\_xcmplx\_0 X0) \quad (8)$$

Assume the following.

$$\exists X0.(v1\_xboole\_0 X0)\wedge((v1\_xcmplx\_0 X0)\wedge((v1\_xxreal\_0 X0)\wedge(v1\_xreal\_0 X0))) \quad (9)$$

Assume the following.

$$k1\_relset\_1 k1\_numbers (k1\_fcont\_1 (k1\_real\_1 np\_1) np\_1) = k1\_numbers \quad (10)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0)\Rightarrow((v1\_xcmplx\_0 (k4\_xcmplx\_0 X0))\wedge (v1\_xreal\_0 (k4\_xcmplx\_0 X0))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0 X0)\wedge(v1\_xreal\_0 X1))\Rightarrow((v1\_funct\_1 (k1\_fcont\_1 X0 X1))\wedge((v1\_funct\_2 (k1\_fcont\_1 X0 X1) k1\_numbers k1\_numbers)\wedge(v1\_fcont\_1 (k1\_fcont\_1 X0 X1)))) \quad (12)$$

Assume the following.

$$\forall X0.((v1\_funct\_1 X0)\wedge(m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers))))\Rightarrow((v1\_funct\_1 (k6\_toprealb X0))\wedge((v1\_funct\_2 (k6\_toprealb X0) (u1\_struct\_0 (k1\_pre\_topc k2\_topalg\_2 (k5\_toprealb (k1\_relset\_1 k1\_numbers X0)))) (u1\_struct\_0 (k1\_pre\_topc k2\_topalg\_2 (k5\_toprealb (k2\_relset\_1 k1\_numbers X0))))))\wedge(m1\_subset\_1 (k6\_toprealb X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 (k1\_pre\_topc k2\_topalg\_2 (k5\_toprealb (k1\_relset\_1 k1\_numbers X0)))) (u1\_struct\_0 (k1\_pre\_topc k2\_topalg\_2 (k5\_toprealb (k2\_relset\_1 k1\_numbers X0)))))))))) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1 X0)\Rightarrow(v1\_relat\_1 (k5\_relat\_1 X0 X1)) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0 X0)\wedge(v1\_xreal\_0 X1))\Rightarrow(m1\_subset\_1 (k2\_rcomp\_1 X0 X1) (k1\_zfmisc\_1 k1\_numbers)) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1 X2)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))))\Rightarrow((v1\_funct\_1 (k2\_partfun1 X0 X1 X2 X3))\wedge(m1\_subset\_1 (k2\_partfun1 X0 X1 X2 X3) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0 X0)\wedge(v1\_xreal\_0 X1))\Rightarrow((v1\_funct\_1 (k1\_fcont\_1 X0 X1))\wedge((v1\_funct\_2 (k1\_fcont\_1 X0 X1) k1\_numbers k1\_numbers)\wedge(m1\_subset\_1 (k1\_fcont\_1 X0 X1) (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers)))))) \quad (17)$$

Assume the following.

$$\forall X0.(((v1\_funct\_1 X0)\wedge(m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers))))\Rightarrow(k6\_toprealb X0 = X0)) \quad (18)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_numbers))\Rightarrow(k5\_toprealb X0 = X0) \quad (19)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0)\Rightarrow(v1\_xreal\_0 X0) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow((v4\_relat\_1 X2 X0)\wedge(v5\_relat\_1 X2 X1)) \quad (21)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers)\Rightarrow(v1\_xreal\_0 X0) \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \quad (23)$$

**Theorem 1**

$$\begin{aligned} & k1\_relset\_1 (u1\_struct\_0 (k1\_pre\_topc k2\_topalg\_2 (k5\_toprealb \\ & (k1\_relset\_1 k1\_numbers (k1\_fcont\_1 (k1\_real\_1 np\_1) np\_1)))))) \\ & (k2\_partfun1 (u1\_struct\_0 (k1\_pre\_topc k2\_topalg\_2 (k5\_toprealb \\ & (k1\_relset\_1 k1\_numbers (k1\_fcont\_1 (k1\_real\_1 np\_1) np\_1)))))) \\ & (u1\_struct\_0 (k1\_pre\_topc k2\_topalg\_2 (k5\_toprealb (k2\_relset\_1 \\ & k1\_numbers (k1\_fcont\_1 (k1\_real\_1 np\_1) np\_1)))))) (k6\_toprealb \\ & (k1\_fcont\_1 (k1\_real\_1 np\_1) np\_1)) (k5\_toprealb (k2\_rcomp\_1 \\ & k6\_numbers np\_1))) = k2\_rcomp\_1 k6\_numbers np\_1 \end{aligned}$$