

t8\_cc0sp1  
(TMGrK81xE5bEbmcMRjDAP4k6fF1Ejxt8bKn)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k4\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_cc0sp1 : \iota \Rightarrow \iota$  be given. Let  $k8\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v13\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v2\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v3\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v4\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v3\_group\_1 : \iota \Rightarrow o$  be given. Let  $v5\_group\_1 : \iota \Rightarrow o$  be given. Let  $v1\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $v3\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $v2\_clvect\_1 : \iota \Rightarrow o$  be given. Let  $v3\_clvect\_1 : \iota \Rightarrow o$  be given. Let  $v4\_clvect\_1 : \iota \Rightarrow o$  be given. Let  $v2\_cfunclom : \iota \Rightarrow o$  be given. Let  $l1\_cfunclom : \iota \Rightarrow o$  be given. Let  $m1\_cc0sp1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_rlvect\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_group\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k1\_clvect\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_group\_1 : \iota \Rightarrow \iota$  be given. Let  $v3\_c0sp1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_cc0sp1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $g1\_cfunclom : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_c0sp1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_c0sp1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_cc0sp1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_c0sp1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_c0sp1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $m1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_numbers : \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k8\_cfunclom : \iota \Rightarrow \iota$  be given. Let  $v1\_cfunclom : \iota \Rightarrow o$  be given. Let  $k2\_cc0sp1 : \iota \Rightarrow \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l1\_clvect\_1 : \iota \Rightarrow o$  be given. Let  $l6\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $k9\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_cfunclom : \iota \Rightarrow \iota$  be given. Let  $k4\_cfunclom : \iota \Rightarrow \iota$  be given. Let  $k3\_cfunclom : \iota \Rightarrow \iota$  be given. Let  $k2\_cfunclom : \iota \Rightarrow \iota$  be given. Let  $k1\_cfunclom : \iota \Rightarrow \iota$  be given. Let  $u2\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $u2\_algstr\_0 : \iota \Rightarrow \iota$  be given. Let  $u1\_algstr\_0 : \iota \Rightarrow \iota$  be given. Let  $u1\_clvect\_1 : \iota \Rightarrow \iota$  be given.

$\iota \Rightarrow \iota$  be given. Let  $u3\_struct\_0 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\
& X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v3\_group\_1 X0) \wedge ( \\
& (v5\_group\_1 X0) \wedge ((v1\_vectsp\_1 X0) \wedge ((v3\_vectsp\_1 X0) \wedge ((v2\_clvect\_1 \\
& X0) \wedge ((v3\_clvect\_1 X0) \wedge ((v4\_clvect\_1 X0) \wedge ((v2\_cfunclom X0) \wedge \\
& (l1\_cfunclom X0)))))))))) \Rightarrow (\forall X1. (m1\_cc0sp1 X1 X0) \Rightarrow \\
& ((\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 X1)) \Rightarrow (\forall X3. ( \\
& m1\_subset\_1 X3 (u1\_struct\_0 X1)) \Rightarrow (\forall X4. (m1\_subset\_1 X4 \\
& (u1\_struct\_0 X0)) \Rightarrow (\forall X5. (m1\_subset\_1 X5 (u1\_struct\_0 X0)) \Rightarrow \\
& (((X2 = X4) \wedge (X3 = X5)) \Rightarrow (k3\_rlvect\_1 X1 X2 X3 = k3\_rlvect\_1 X0 X4 X5)))))) \wedge \\
& ((\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 X1)) \Rightarrow (\forall X3. ( \\
& m1\_subset\_1 X3 (u1\_struct\_0 X1)) \Rightarrow (\forall X4. (m1\_subset\_1 X4 \\
& (u1\_struct\_0 X0)) \Rightarrow (\forall X5. (m1\_subset\_1 X5 (u1\_struct\_0 X0)) \Rightarrow \\
& (((X2 = X4) \wedge (X3 = X5)) \Rightarrow (k8\_group\_1 X1 X2 X3 = k8\_group\_1 X0 X4 X5)))))) \wedge \\
& ((\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 X1)) \Rightarrow (\forall X3. ( \\
& m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (\forall X4. (v1\_xcmplx\_0 X4) \Rightarrow \\
& ((X2 = X3) \Rightarrow (k1\_clvect\_1 X1 X2 X4 = k1\_clvect\_1 X0 X3 X4)))))) \wedge ((k1\_group\_1 \\
& X1 = k1\_group\_1 X0) \wedge (k4\_struct\_0 X1 = k4\_struct\_0 X0))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\
& X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v3\_group\_1 X0) \wedge ( \\
& (v5\_group\_1 X0) \wedge ((v1\_vectsp\_1 X0) \wedge ((v3\_vectsp\_1 X0) \wedge ((v2\_clvect\_1 \\
& X0) \wedge ((v3\_clvect\_1 X0) \wedge ((v4\_clvect\_1 X0) \wedge ((v2\_cfunclom X0) \wedge \\
& (l1\_cfunclom X0)))))))))) \Rightarrow (\forall X1. ((\neg v1\_xboole\_0 X1) \wedge \\
& ((v3\_c0sp1 X1 X0) \wedge ((v1\_cc0sp1 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\
& (u1\_struct\_0 X0)))))) \Rightarrow (m1\_cc0sp1 (g1\_cfunclom X1 (k2\_c0sp1 X0 \\
& X1) (k1\_c0sp1 X0 X1) (k1\_cc0sp1 X0 X1) (k4\_c0sp1 X0 X1) (k3\_c0sp1 \\
& X0 X1) X0))
\end{aligned} \tag{2}$$

Assume the following.

$$m1\_subset\_1 k1\_xboole\_0 k4\_ordinal1 \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((\neg v1\_xboole\_0 X1) \wedge (m1\_funcl_2 \\
X2 X0 X1)) \Rightarrow (\forall X3. (m2\_funcl_2 X3 X0 X1 X2) \Leftrightarrow (m1\_subset\_1 X3 \\
X2)) \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((\neg v1\_xboole\_0 X0) \wedge (m1\_subset\_1 \\
X2 X0)) \Rightarrow (k8\_funcop\_1 X0 X1 X2 = k2\_funcop\_1 X1 X2) \tag{5}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{6}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & (((v1\_funct\_1 X1)\wedge((v1\_funct\_2 X1 (k2\_zfmisc\_1 X0 X0) X0)\wedge(m1\_subset\_1 \\ & X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0) X0))))))\wedge(((v1\_funct\_1 \\ & X2)\wedge((v1\_funct\_2 X2 (k2\_zfmisc\_1 X0 X0) X0)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0) X0))))))\wedge(((v1\_funct\_1 X3)\wedge( \\ & (v1\_funct\_2 X3 (k2\_zfmisc\_1 k2\_numbers X0) X0)\wedge(m1\_subset\_1 X3 \\ & (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_zfmisc\_1 k2\_numbers X0) X0))))))\wedge \\ & ((m1\_subset\_1 X4 X0)\wedge(m1\_subset\_1 X5 X0))))\Rightarrow(\forall X6.\forall X7. \\ & \forall X8.\forall X9.\forall X10.\forall X11.(g1\_cfundom X0 \\ & X1 X2 X3 X4 X5 = g1\_cfundom X6 X7 X8 X9 X10 X11)\Rightarrow((X0 = X6)\wedge((X1 = X7)\wedge \\ & ((X2 = X8)\wedge((X3 = X9)\wedge((X4 = X10)\wedge(X5 = X11)))))) \end{aligned} \quad (8)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1)\wedge(v3\_ordinal1 k4\_ordinal1) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0 X0)\Rightarrow(((v13\_algstr\_0 (k8\_cfundom X0))\wedge \\ & ((v2\_rlvect\_1 (k8\_cfundom X0))\wedge((v3\_rlvect\_1 (k8\_cfundom \\ & X0))\wedge((v4\_rlvect\_1 (k8\_cfundom X0))\wedge((v2\_clvect\_1 (k8\_cfundom \\ & X0))\wedge((v3\_clvect\_1 (k8\_cfundom X0))\wedge((v4\_clvect\_1 (k8\_cfundom \\ & X0))\wedge((v3\_group\_1 (k8\_cfundom X0))\wedge((v5\_group\_1 (k8\_cfundom \\ & X0))\wedge((v1\_vectsp\_1 (k8\_cfundom X0))\wedge((v3\_vectsp\_1 (k8\_cfundom \\ & X0))\wedge((v1\_cfundom (k8\_cfundom X0))\wedge(v2\_cfundom (k8\_cfundom \\ & X0)))))))))))))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0 X0)\Rightarrow((\neg v2\_struct\_0 (k8\_cfundom X0))\wedge (v1\_cfundom (k8\_cfundom X0))) \quad (11)$$

Assume the following.

$$\neg v1\_xboole\_0 k2\_numbers \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0 X0)\Rightarrow((\neg v1\_xboole\_0 (k2\_cc0sp1 X0))\wedge \\ & (((v3\_c0sp1 (k2\_cc0sp1 X0) (k8\_cfundom X0))\wedge(v1\_cc0sp1 (k2\_cc0sp1 \\ & X0) (k8\_cfundom X0)))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\wedge((\neg v1\_xboole\_0 X1)\wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))))\Rightarrow(\forall X2.(m2\_subset\_1 X2 X0 X1)\Rightarrow(m1\_subset\_1 X2 X0)) \quad (14)$$

Assume the following.

$$\forall X0.(l2\_algstr\_0 X0)\Rightarrow((l2\_struct\_0 X0)\wedge(l1\_algstr\_0 X0)) \quad (15)$$

Assume the following.

$$\forall X0.(l1\_clvect\_1 X0)\Rightarrow(l2\_algstr\_0 X0) \quad (16)$$

Assume the following.

$$\forall X0.(l1\_cfunclom X0)\Rightarrow((l6\_algstr\_0 X0)\wedge(l1\_clvect\_1 X0)) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.(\neg v1\_xboole\_0 X1)\Rightarrow(m1\_funct\_2 (k9\_funct\_2 X0 X1) X0 X1) \quad (18)$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0 X0)\Rightarrow((v1\_cfunclom (k8\_cfunclom X0))\wedge (l1\_cfunclom (k8\_cfunclom X0))) \quad (19)$$

Assume the following.

$$m2\_subset\_1 k6\_numbers k1\_numbers k5\_numbers \quad (20)$$

Assume the following.

$$m1\_subset\_1 k5\_numbers (k1\_zfmisc\_1 k1\_numbers) \quad (21)$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0 X0)\Rightarrow(m2\_funct\_2 (k5\_cfunclom X0) X0 k2\_numbers (k9\_funct\_2 X0 k2\_numbers)) \quad (22)$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0 X0)\Rightarrow(m2\_funct\_2 (k4\_cfunclom X0) X0 k2\_numbers (k9\_funct\_2 X0 k2\_numbers)) \quad (23)$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0 X0)\Rightarrow((v1\_funct\_1 (k3\_cfunclom X0))\wedge ((v1\_funct\_2 (k3\_cfunclom X0) (k2\_zfmisc\_1 k2\_numbers (k9\_funct\_2 X0 k2\_numbers)) (k9\_funct\_2 X0 k2\_numbers))\wedge(m1\_subset\_1 (k3\_cfunclom X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_zfmisc\_1 k2\_numbers (k9\_funct\_2 X0 k2\_numbers)) (k9\_funct\_2 X0 k2\_numbers)))))) \quad (24)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow & ((v1\_funct\_1 (k2\_cfunclom X0)) \wedge \\ & ((v1\_funct\_2 (k2\_cfunclom X0) (k2\_zfmisc\_1 (k9\_funct\_2 X0 k2\_numbers) \\ & (k9\_funct\_2 X0 k2\_numbers)) (k9\_funct\_2 X0 k2\_numbers)) \wedge (m1\_subset\_1 \\ & (k2\_cfunclom X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_zfmisc\_1 (k9\_funct\_2 \\ X0 k2\_numbers) (k9\_funct\_2 X0 k2\_numbers)) (k9\_funct\_2 X0 k2\_numbers)))))) \end{aligned} \quad (25)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow & ((\neg v1\_xboole\_0 (k2\_cc0sp1 X0)) \wedge \\ & (m1\_subset\_1 (k2\_cc0sp1 X0) (k1\_zfmisc\_1 (u1\_struct\_0 (k8\_cfunclom \\ X0)))))) \end{aligned} \quad (26)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow & ((v1\_funct\_1 (k1\_cfunclom X0)) \wedge \\ & ((v1\_funct\_2 (k1\_cfunclom X0) (k2\_zfmisc\_1 (k9\_funct\_2 X0 k2\_numbers) \\ & (k9\_funct\_2 X0 k2\_numbers)) (k9\_funct\_2 X0 k2\_numbers)) \wedge (m1\_subset\_1 \\ & (k1\_cfunclom X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_zfmisc\_1 (k9\_funct\_2 \\ X0 k2\_numbers) (k9\_funct\_2 X0 k2\_numbers)) (k9\_funct\_2 X0 k2\_numbers)))))) \end{aligned} \quad (27)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow & (k8\_cfunclom X0 = g1\_cfunclom (k9\_funct\_2 \\ X0 k2\_numbers) (k2\_cfunclom X0) (k1\_cfunclom X0) (k3\_cfunclom \\ X0) (k5\_cfunclom X0) (k4\_cfunclom X0)) \end{aligned} \quad (28)$$

Assume the following.

$$\forall X0.(l2\_struct\_0 X0) \Rightarrow (k4\_struct\_0 X0 = u2\_struct\_0 X0) \quad (29)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow & (k3\_cc0sp1 X0 = g1\_cfunclom (k2\_cc0sp1 \\ X0) (k2\_c0sp1 (k8\_cfunclom X0) (k2\_cc0sp1 X0)) (k1\_c0sp1 (k8\_cfunclom \\ X0) (k2\_cc0sp1 X0)) (k1\_cc0sp1 (k8\_cfunclom X0) (k2\_cc0sp1 X0)) \\ & (k4\_c0sp1 (k8\_cfunclom X0) (k2\_cc0sp1 X0)) (k3\_c0sp1 (k8\_cfunclom \\ X0) (k2\_cc0sp1 X0))) \end{aligned} \quad (30)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow & (k4\_cfunclom X0 = k8\_funcop\_1 k1\_numbers \\ X0 k6\_numbers) \end{aligned} \quad (31)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1\_xboole\_0 X0) \Rightarrow & (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ X0)) \Rightarrow (v1\_xboole\_0 X1)) \end{aligned} \quad (32)$$

Assume the following.

$$\forall X0. (l1\_cfunclom X0) \Rightarrow ((v1\_cfunclom X0) \Rightarrow (X0 = g1\_cfunclom (u1\_struct\_0 X0) (u2\_algstr\_0 X0) (u1\_algstr\_0 X0) (u1\_clvect\_1 X0) (u3\_struct\_0 X0) (u2\_struct\_0 X0))) \quad (33)$$

**Theorem 1**

$$\forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (k4\_struct\_0 (k3\_cc0sp1 X0) = k8\_funcop\_1 k5\_numbers X0 k6\_numbers)$$