

t76\_csspace  
(TMPv7ykUG4iFqJcXab8RyZh9gBgarnMBk8K)

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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  $v2\_clvect\_1 : \iota \Rightarrow o$  be given. Let  $v3\_clvect\_1 : \iota \Rightarrow o$  be given. Let  $v4\_clvect\_1 : \iota \Rightarrow o$  be given. Let  $v5\_clvect\_1 : \iota \Rightarrow o$  be given. Let  $v2\_csspace : \iota \Rightarrow o$  be given. Let  $l1\_csspace : \iota \Rightarrow o$  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  $k5\_numbers : \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_normsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k16\_csspace : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $k2\_normsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k5\_vfunct\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l1\_clvect\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v3\_rlvect\_1 X0) \wedge (l2\_algstr\_0 \\
& X0))) \Rightarrow (\forall X1. ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers \\
& (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& k5\_numbers (u1\_struct\_0 X0)))))) \Rightarrow (\forall X2. ((v1\_funct\_1 X2) \wedge \\
& ((v1\_funct\_2 X2 k5\_numbers (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X2 \\
& (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 X0)))))) \Rightarrow \\
& (\forall X3. ((v1\_funct\_1 X3) \wedge ((v1\_funct\_2 X3 k5\_numbers (u1\_struct\_0 \\
& X0)) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 \\
& X0)))))) \Rightarrow (r2\_funct\_2 k5\_numbers (u1\_struct\_0 X0) (k2\_normsp\_1 \\
& X0 (k2\_normsp\_1 X0 X1 X2) X3) (k2\_normsp\_1 X0 X1 (k2\_normsp\_1 X0 X2 \\
& X3))))))
\end{aligned} \tag{1}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0 X0)\wedge((v13\_algstr\_0 \\ & X0)\wedge((v2\_rlvect\_1 X0)\wedge((v3\_rlvect\_1 X0)\wedge((v4\_rlvect\_1 X0)\wedge \\ & ((v2\_clvect\_1 X0)\wedge((v3\_clvect\_1 X0)\wedge((v4\_clvect\_1 X0)\wedge((v5\_clvect\_1 \\ & X0)\wedge((v2\_csspace X0)\wedge(l1\_csspace X0))))))))))\wedge(((v1\_funct\_1 \\ & X1)\wedge((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 X0))\wedge(m1\_subset\_1 \\ & X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 X0))))))\wedge \\ & ((v1\_funct\_1 X2)\wedge((v1\_funct\_2 X2 k5\_numbers (u1\_struct\_0 X0))\wedge \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 \\ & X0)))))))\Rightarrow(k16\_csspace X0 X1 X2 = k2\_normsp\_1 X0 X1 X2) \end{aligned} \quad (3)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1)\wedge(v3\_ordinal1 k4\_ordinal1) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0 X0)\wedge(((\neg v2\_struct\_0 \\ & X1)\wedge(l2\_algstr\_0 X1))\wedge((v1\_funct\_1 X2)\wedge((v1\_funct\_2 X2 X0 (u1\_struct\_0 \\ & X1))\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 (u1\_struct\_0 \\ & X1))))))))\Rightarrow((v1\_funct\_1 (k5\_vfunct\_1 X0 X1 X2))\wedge(v1\_partfun1 \\ & (k5\_vfunct\_1 X0 X1 X2) X0)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(l1\_csspace X0)\Rightarrow(l1\_clvect\_1 X0) \quad (6)$$

Assume the following.

$$\forall X0.(l1\_clvect\_1 X0)\Rightarrow(l2\_algstr\_0 X0) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0 X0)\wedge(((\neg v2\_struct\_0 \\ & X1)\wedge(l2\_algstr\_0 X1))\wedge((v1\_funct\_1 X2)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 (u1\_struct\_0 X1)))))))\Rightarrow((v1\_funct\_1 (k5\_vfunct\_1 \\ & X0 X1 X2))\wedge(m1\_subset\_1 (k5\_vfunct\_1 X0 X1 X2) (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 (u1\_struct\_0 X1)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0 X0)\wedge(l2\_algstr\_0 \\ & X0))\wedge(((v1\_funct\_1 X1)\wedge((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 \\ & X0))\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 \\ & X0))))))\wedge((v1\_funct\_1 X2)\wedge((v1\_funct\_2 X2 k5\_numbers (u1\_struct\_0 \\ & X0))\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 \\ & X0)))))))\Rightarrow((v1\_funct\_1 (k3\_normsp\_1 X0 X1 X2))\wedge((v1\_funct\_2 \\ & (k3\_normsp\_1 X0 X1 X2) k5\_numbers (u1\_struct\_0 X0))\wedge(m1\_subset\_1 \\ & (k3\_normsp\_1 X0 X1 X2) (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 \\ & X0)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0 X0)\wedge((v13\_algstr\_0 \\
& X0)\wedge((v2\_rlvect\_1 X0)\wedge((v3\_rlvect\_1 X0)\wedge((v4\_rlvect\_1 X0)\wedge \\
& ((v2\_clvect\_1 X0)\wedge((v3\_clvect\_1 X0)\wedge((v4\_clvect\_1 X0)\wedge((v5\_clvect\_1 \\
& X0)\wedge((v2\_csspace X0)\wedge(l1\_csspace X0))))))))))\wedge(((v1\_funct\_1 \\
& X1)\wedge((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 X0))\wedge(m1\_subset\_1 \\
& X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 X0))))))\wedge \\
& ((v1\_funct\_1 X2)\wedge((v1\_funct\_2 X2 k5\_numbers (u1\_struct\_0 X0))\wedge \\
& (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 \\
& X0))))))\Rightarrow((v1\_funct\_1 (k16\_csspace X0 X1 X2))\wedge((v1\_funct\_2 \\
& (k16\_csspace X0 X1 X2) k5\_numbers (u1\_struct\_0 X0))\wedge(m1\_subset\_1 \\
& (k16\_csspace X0 X1 X2) (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 \\
& X0))))))
\end{aligned} \tag{10}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0)\wedge(l2\_algstr\_0 X0))\Rightarrow(\forall X1. \\
& ((v1\_funct\_1 X1)\wedge((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 X0))\wedge \\
& (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 \\
& X0))))))\Rightarrow(\forall X2.((v1\_funct\_1 X2)\wedge((v1\_funct\_2 X2 k5\_numbers \\
& (u1\_struct\_0 X0))\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& k5\_numbers (u1\_struct\_0 X0))))))\Rightarrow(k3\_normsp\_1 X0 X1 X2 = k2\_normsp\_1 \\
& X0 X1 (k5\_vfunct\_1 k5\_numbers X0 X2)))
\end{aligned} \tag{11}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 \\
& (k2\_zfmisc\_1 X0 X1)))\Rightarrow((v1\_partfun1 X2 X0)\Rightarrow(v1\_funct\_2 X2 X0 X1))
\end{aligned} \tag{12}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.(((\neg v2\_struct\_0 X0)\wedge((v13\_algstr\_0 X0)\wedge((v2\_rlvect\_1 \\
& X0)\wedge((v3\_rlvect\_1 X0)\wedge((v4\_rlvect\_1 X0)\wedge((v2\_clvect\_1 X0)\wedge \\
& ((v3\_clvect\_1 X0)\wedge((v4\_clvect\_1 X0)\wedge((v5\_clvect\_1 X0)\wedge((v2\_csspace \\
& X0)\wedge(l1\_csspace X0))))))))))\Rightarrow(\forall X1.((v1\_funct\_1 X1)\wedge \\
& ((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 X0))\wedge(m1\_subset\_1 X1 \\
& (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 X0))))))\Rightarrow \\
& (\forall X2.((v1\_funct\_1 X2)\wedge((v1\_funct\_2 X2 k5\_numbers (u1\_struct\_0 \\
& X0))\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 \\
& X0))))))\Rightarrow(\forall X3.((v1\_funct\_1 X3)\wedge((v1\_funct\_2 X3 k5\_numbers \\
& (u1\_struct\_0 X0))\wedge(m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& k5\_numbers (u1\_struct\_0 X0))))))\Rightarrow(r2\_funct\_2 k5\_numbers (u1\_struct\_0 \\
& X0) (k3\_normsp\_1 X0 (k16\_csspace X0 X1 X2) X3) (k16\_csspace X0 X1 \\
& (k3\_normsp\_1 X0 X2 X3))))))
\end{aligned}$$