l32_csspace (TMY47cy3Zh1SSab625stVMLpcjz9tvdD36L)

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Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $c2\_\_csspace : \iota$ be given. Let $k1\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ 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 $v2\_clvect\_1 : \iota \Rightarrow o$ 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 $l1\_clvect\_1 : \iota \Rightarrow o$ be given. Let $k4\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k5\_complex1 : \iota$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $k2\_numbers : \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ 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 $k3\_clvect\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(k4\_tarski\ X0\ X1 \in k2\_zfmisc\_1\ X2\ X3) \Leftrightarrow ((X0 \in X2) \wedge (X1 \in X3)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X1 \in X0) \Rightarrow (k1\_funct\_1\ (k2\_funcop\_1\ X0\ X2)\ X1 = X2) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X0) \wedge (m1\_subset\_1\ X2\ X0)) \Rightarrow (k8\_funcop\_1\ X0\ X1\ X2 = k2\_funcop\_1\ X1\ X2) \tag{3}$$

Assume the following.

$$k5\_complex1 = k1\_xboole\_0 \tag{4}$$

Assume the following.

$$\neg v1\_xboole\_0\ k2\_numbers \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1\ (k2\_funcop\_1\ X0\ X1))\wedge(v1\_funct\_1\ (k2\_funcop\_1\ X0\ X1)) \tag{6}$$

Assume the following.

$$m1\_subset\_1\ k5\_complex1\ k2\_numbers \tag{7}$$

Assume the following.

$$(v1\_funct\_1\ c2\_\_csspace)\wedge((v1\_funct\_2\ c2\_\_csspace\ (k2\_zfmisc\_1\ (u1\_struct\_0\ (k3\_clvect\_1\ (the\ (\lambda X0 : \iota.(\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v2\_clvect\_1\ X0)\wedge((v3\_clvect\_1\ X0)\wedge((v4\_clvect\_1\ X0)\wedge((v5\_clvect\_1\ X0)\wedge(l1\_clvect\_1\ X0))))))))))))\ (u1\_struct\_0\ (k3\_clvect\_1\ (the\ (\lambda X0 : \iota.(\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v2\_clvect\_1\ X0)\wedge((v3\_clvect\_1\ X0)\wedge((v4\_clvect\_1\ X0)\wedge((v5\_clvect\_1\ X0)\wedge(l1\_clvect\_1\ X0))))))))))))\ k2\_numbers)\wedge(m1\_subset\_1\ c2\_\_csspace\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ (k3\_clvect\_1\ (the\ (\lambda X0 : \iota.(\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v2\_clvect\_1\ X0)\wedge((v3\_clvect\_1\ X0)\wedge((v4\_clvect\_1\ X0)\wedge((v5\_clvect\_1\ X0)\wedge(l1\_clvect\_1\ X0))))))))))))\ (u1\_struct\_0\ (k3\_clvect\_1\ (the\ (\lambda X0 : \iota.(\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v2\_clvect\_1\ X0)\wedge((v3\_clvect\_1\ X0)\wedge((v4\_clvect\_1\ X0)\wedge((v5\_clvect\_1\ X0)\wedge(l1\_clvect\_1\ X0))))))))))))\ k2\_numbers)))) \tag{8}$$

Assume the following.

$$c2\_\_csspace = k8\_funcop\_1\ k2\_numbers\ (k2\_zfmisc\_1\ (u1\_struct\_0\ (k3\_clvect\_1\ (the\ (\lambda X0 : \iota.(\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v2\_clvect\_1\ X0)\wedge((v3\_clvect\_1\ X0)\wedge((v4\_clvect\_1\ X0)\wedge((v5\_clvect\_1\ X0)\wedge(l1\_clvect\_1\ X0))))))))))))\ (u1\_struct\_0\ (k3\_clvect\_1\ (the\ (\lambda X0 : \iota.(\neg v2\_struct\_0\ X0)\wedge((v13\_algstr\_0\ X0)\wedge((v2\_rlvect\_1\ X0)\wedge((v3\_rlvect\_1\ X0)\wedge((v4\_rlvect\_1\ X0)\wedge((v2\_clvect\_1\ X0)\wedge((v3\_clvect\_1\ X0)\wedge((v4\_clvect\_1\ X0)\wedge((v5\_clvect\_1\ X0)\wedge(l1\_clvect\_1\ X0))))))))))))\ k5\_complex1 \tag{9}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge(v1\_funct\_1\ X0))\Rightarrow(\forall X1.\forall X2.((X1 \in k9\_xtuple\_0\ X0)\Rightarrow((X2 = k1\_funct\_1\ X0\ X1)\Leftrightarrow(k4\_tarski\ X1\ X2 \in X0)))\wedge((\neg X1 \in k9\_xtuple\_0\ X0)\Rightarrow((X2 = k1\_funct\_1\ X0\ X1)\Leftrightarrow(X2 = k1\_xboole\_0)))) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.k2\_funcop\_1\ X0\ X1 = k2\_zfmisc\_1\ X0\ (k1\_tarski\ X1) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k9\_xtuple\_0\ X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (\exists X3.k4\_tarski\ X2\ X3 \in X0)) \tag{12}$$

Theorem 1

$$k1\_funct\_1\ c2\_\_csspace\ (k1\_domain\_1\ (u1\_struct\_0\ (the\ (\lambda X0 : \iota.(\neg v2\_struct\_0\ X0) \wedge ((v13\_algstr\_0\ X0) \wedge ((v2\_rlvect\_1\ X0) \wedge ((v3\_rlvect\_1\ X0) \wedge ((v4\_rlvect\_1\ X0) \wedge ((v2\_clvect\_1\ X0) \wedge ((v3\_clvect\_1\ X0) \wedge ((v4\_clvect\_1\ X0) \wedge ((v5\_clvect\_1\ X0) \wedge (l1\_clvect\_1\ X0))))))))))))\ (u1\_struct\_0\ (the\ (\lambda X0 : \iota.(\neg v2\_struct\_0\ X0) \wedge ((v13\_algstr\_0\ X0) \wedge ((v2\_rlvect\_1\ X0) \wedge ((v3\_rlvect\_1\ X0) \wedge ((v4\_rlvect\_1\ X0) \wedge ((v2\_clvect\_1\ X0) \wedge ((v3\_clvect\_1\ X0) \wedge ((v4\_clvect\_1\ X0) \wedge ((v5\_clvect\_1\ X0) \wedge (l1\_clvect\_1\ X0))))))))))))\ (k4\_struct\_0\ (the\ (\lambda X0 : \iota.(\neg v2\_struct\_0\ X0) \wedge ((v13\_algstr\_0\ X0) \wedge ((v2\_rlvect\_1\ X0) \wedge ((v3\_rlvect\_1\ X0) \wedge ((v4\_rlvect\_1\ X0) \wedge ((v2\_clvect\_1\ X0) \wedge ((v3\_clvect\_1\ X0) \wedge ((v4\_clvect\_1\ X0) \wedge ((v5\_clvect\_1\ X0) \wedge (l1\_clvect\_1\ X0))))))))))))\ (k4\_struct\_0\ (the\ (\lambda X0 : \iota.(\neg v2\_struct\_0\ X0) \wedge ((v13\_algstr\_0\ X0) \wedge ((v2\_rlvect\_1\ X0) \wedge ((v3\_rlvect\_1\ X0) \wedge ((v4\_rlvect\_1\ X0) \wedge ((v2\_clvect\_1\ X0) \wedge ((v3\_clvect\_1\ X0) \wedge ((v4\_clvect\_1\ X0) \wedge ((v5\_clvect\_1\ X0) \wedge (l1\_clvect\_1\ X0))))))))))))) = k5\_complex1$$