t10_scmbsort (TMQcX77qZ3ebRAv1th5e3zz2mwdjypVXnJk)

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Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_numbers : \iota$ be given. Let $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_compos\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_scmfsa\_2 : \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_finset\_1 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_scmfsa\_2 : \iota \Rightarrow o$ be given. Let $v1\_ami\_2 : \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k14\_scmfsa\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15\_scmfsa\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_sf\_mastr : \iota \Rightarrow \iota$ be given. Let $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_sf\_mastr : \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (u1\_compos\_1\ k1\_scmfsa\_2)) \Rightarrow (\forall X1.\ ((v1\_relat\_1\ X1) \wedge ((v4\_relat\_1\ X1\ k5\_numbers) \wedge ((v5\_relat\_1\ X1\ (u1\_compos\_1\ k1\_scmfsa\_2)) \wedge ((v1\_funct\_1\ X1) \wedge (v1\_finset\_1\ X1))))) \Rightarrow ((X0 \in k2\_relset\_1\ (u1\_compos\_1\ k1\_scmfsa\_2)\ X1) \Rightarrow (r1\_tarski\ (k3\_sf\_mastr\ X0)\ (k4\_sf\_mastr\ X1)))) \tag{1}$$

Assume the following.

$$\forall X0.((v1\_ami\_2\ X0) \wedge (m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_scmfsa\_2))) \Rightarrow (\forall X1.((v1\_ami\_2\ X1) \wedge (m1\_subset\_1\ X1\ (u1\_struct\_0\ k1\_scmfsa\_2))) \Rightarrow (\forall X2.(m1\_scmfsa\_2\ X2) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_compos\_1\ k1\_scmfsa\_2)) \Rightarrow (((X3 = k14\_scmfsa\_2\ X0\ X1\ X2) \vee (X3 = k15\_scmfsa\_2\ X0\ X1\ X2)) \Rightarrow (k3\_sf\_mastr\ X3 = k1\_tarski\ X2))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge (v5\_relat\_1\ X1\ X0)) \Rightarrow (k2\_relset\_1\ X0\ X1 = k10\_xtuple\_0\ X1) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski\ (k1\_tarski\ X0)\ X1) \Leftrightarrow (X0 \in X1) \tag{4}$$

Theorem 1

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v5\_relat\_1\ X0\ (u1\_compos\_1\ k1\_scmfsa\_2))\wedge((v1\_funct\_1\ X0)\wedge(v1\_finset\_1\ X0)))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_compos\_1\ k1\_scmfsa\_2))\Rightarrow(\forall X2.(m1\_scmfsa\_2\ X2)\Rightarrow(\forall X3.((v1\_ami\_2\ X3)\wedge(m1\_subset\_1\ X3\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow(\forall X4.((v1\_ami\_2\ X4)\wedge(m1\_subset\_1\ X4\ (u1\_struct\_0\ k1\_scmfsa\_2)))\Rightarrow((X1 \in k10\_xtuple\_0\ X0)\Rightarrow(((X1 \neq k14\_scmfsa\_2\ X3\ X4\ X2)\wedge(X1 \neq k15\_scmfsa\_2\ X3\ X4\ X2))\vee(X2 \in k4\_sf\_mastr\ X0)))))))$$