

t8\_scmbSORT  
 (TMJoNL5pxgS2FncSU6eL5253tjp5ZmCPMzo)

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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  $k1\_scmf\_sa\_2 : \iota$  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  $v1\_ami\_2 : \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k12\_scmf\_sa\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k13\_scmf\_sa\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_sf\_mastr : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_sf\_mastr : \iota \Rightarrow \iota$  be given. Let  $k4\_scmf\_sa\_m : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (r1\_tarski (k1\_tarski X0) X1) \Leftrightarrow (X0 \in X1) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1\_subset\_1 X0 (u1\_compos\_1 k1\_scmf\_sa\_2)) \Rightarrow (\forall X1. \\ & ((v1\_relat\_1 X1) \wedge ((v4\_relat\_1 X1 k5\_numbers) \wedge ((v5\_relat\_1 X1 \\ & (u1\_compos\_1 k1\_scmf\_sa\_2)) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finset\_1 X1)))))) \Rightarrow \\ & ((X0 \in k2\_relset\_1 (u1\_compos\_1 k1\_scmf\_sa\_2) X1) \Rightarrow (r1\_tarski ( \\ & k1\_sf\_mastr X0) (k2\_sf\_mastr X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1\_ami\_2 X0) \wedge (m1\_subset\_1 X0 (u1\_struct\_0 k1\_scmf\_sa\_2))) \Rightarrow \\ & (\forall X1. (m2\_subset\_1 X1 k1\_numbers k5\_numbers) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (u1\_compos\_1 k1\_scmf\_sa\_2)) \Rightarrow (((X2 = k12\_scmf\_sa\_2 \\ & X1 X0) \vee (X2 = k13\_scmf\_sa\_2 X1 X0)) \Rightarrow (k1\_sf\_mastr X2 = k4\_scmf\_sa\_m \\ & X0)))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. ((v1\_ami\_2 X0) \wedge (m1\_subset\_1 X0 (u1\_struct\_0 k1\_scmf\_sa\_2))) \Rightarrow (k4\_scmf\_sa\_m X0 = k1\_tarski X0) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1)\wedge(v5\_relat\_1 X1 X0))\Rightarrow(k2\_relset\_1 X0 X1 = k10\_xtuple\_0 X1) \quad (5)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0)\wedge((v4\_relat\_1 X0 k5\_numbers)\wedge((v5\_relat\_1 \\ & X0 (u1\_compos\_1 k1\_scmfsa\_2))\wedge((v1\_funct\_1 X0)\wedge(v1\_finset\_1 \\ & X0))))))\Rightarrow(\forall X1.(m1\_subset\_1 X1 (u1\_compos\_1 k1\_scmfsa\_2))\Rightarrow \\ & (\forall X2.((v1\_ami\_2 X2)\wedge(m1\_subset\_1 X2 (u1\_struct\_0 k1\_scmfsa\_2)))\Rightarrow \\ & (\forall X3.(m2\_subset\_1 X3 k1\_numbers k5\_numbers)\Rightarrow((X1 \in k10\_xtuple\_0 \\ & X0)\Rightarrow(((X1 \neq k12\_scmfsa\_2 X3 X2)\wedge(X1 \neq k13\_scmfsa\_2 X3 X2))\vee(X2 \in \\ & k2\_sf\_mastr X0)))))) \end{aligned}$$