

t2\_scmring1  
(TMc7GZ743Gfn7dgxksAt5r7axeBWXCKxQE3)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_ami\_2 : \iota$  be given. Let  $k1\_scmring1 : \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarSKI : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v5\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $k6\_afinsq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_afinsq\_1 : \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  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  $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_ami\_2 : \iota$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_ami\_2 : \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarSKI X0 X1) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1\_relat\_1 X2) \wedge ((v5\_ordinal1 X2) \wedge ((v1\_funct\_1 X2) \wedge (v1\_finset\_1 X2)))) \Rightarrow ((X2 = k6\_afinsq\_1 X0 X1) \Leftrightarrow ((k1\_afinsq\_1 X2 = np\_2) \wedge ((k1\_funct\_1 X2 k6\_numbers = X0) \wedge (k1\_funct\_1 X2 np\_1 = X1)))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow (\forall X2. ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \Rightarrow ((X0 \in k9\_xtuple\_0 X1) \Rightarrow (k1\_funct\_1 (k3\_relat\_1 X1 X2) X0 = k1\_funct\_1 X2 (k1\_funct\_1 X1 X0)))) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.r1\_tarski\ X0\ X0 \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1\_xboole\_0\ X0)\wedge \\ & (((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X0\ X1)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1\ X0\ X1))))))\wedge(m1\_subset\_1\ X3\ X0)))\Rightarrow(k3\_funct\_2\ X0 \\ & X1\ X2\ X3 = k1\_funct\_1\ X2\ X3) \end{aligned} \quad (6)$$

Assume the following.

$$k5\_numbers \in k1\_ami\_2 \quad (7)$$

Assume the following.

$$k9\_xtuple\_0\ k3\_ami\_2 = k1\_ami\_2 \quad (8)$$

Assume the following.

$$\neg v1\_xboole\_0\ k1\_ami\_2 \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(v5\_ordinal1\ (k6\_afinsq\_1\ X0\ X1))\wedge(v1\_finset\_1 \\ & (k6\_afinsq\_1\ X0\ X1)) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & (v1\_funct\_1\ k3\_ami\_2)\wedge((v1\_funct\_2\ k3\_ami\_2\ k1\_ami\_2\ np\_2)\wedge \\ & (m1\_subset\_1\ k3\_ami\_2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_ami\_2\ np\_2)))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_struct\_0\ X0))\Rightarrow((v1\_relat\_1 \\ & (k1\_scmring1\ X0))\wedge((v4\_relat\_1\ (k1\_scmring1\ X0)\ np\_2)\wedge((v1\_funct\_1 \\ & (k1\_scmring1\ X0))\wedge(v1\_partfun1\ (k1\_scmring1\ X0)\ np\_2)))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_funct\_1\ X0)\wedge((v1\_funct\_2\ X0\ k1\_ami\_2\ np\_2)\wedge \\ & (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_ami\_2\ np\_2))))))\Rightarrow \\ & ((X0 = k3\_ami\_2)\Leftrightarrow(\forall X1.(m1\_subset\_1\ X1\ k1\_ami\_2)\Rightarrow(((X1 = \\ & k5\_numbers)\Rightarrow(k3\_funct\_2\ k1\_ami\_2\ np\_2\ X0\ X1 = k6\_numbers))\wedge( \\ & (X1 \in k2\_ami\_2)\Rightarrow(k3\_funct\_2\ k1\_ami\_2\ np\_2\ X0\ X1 = np\_1)))))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_struct\_0\ X0))\Rightarrow(k1\_scmring1 \\ & X0 = k6\_afinsq\_1\ k5\_numbers\ (u1\_struct\_0\ X0)) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v1\_relat\_1\ X2) \end{aligned} \quad (15)$$

**Theorem 1**

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_struct\_0 X0)) \Rightarrow (k1\_funct\_1 \\ (k3\_relat\_1 k3\_ami\_2 (k1\_scmring1 X0)) k5\_numbers = k5\_numbers)$$