

t68\_scmfsa8c  
(TMUXqK8rGpkGhQSDCp3kkvog4Jxc9Cb6wfr)

October 27, 2020

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  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v5\_funct\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_3 : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $v1\_afinsq\_1 : \iota \Rightarrow o$  be given. Let  $v1\_scmfsa7b : \iota \Rightarrow o$  be given. Let  $r5\_scmfsa7b : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_4 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_scmfsa\_2 : \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $v1\_ami\_2 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r4\_scmfsa7b : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v1\_scmfsa\_m : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
& \forall X0. ((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 (u1\_struct\_0 k1\_scmfsa\_2)) \wedge \\
& ((v1\_funct\_1 X0) \wedge ((v5\_funct\_1 X0 (k2\_memstr\_0 np\_3 k1\_scmfsa\_2)) \wedge \\
& (v1\_partfun1 X0 (u1\_struct\_0 k1\_scmfsa\_2)))))) \Rightarrow (\forall X1. \\
& ((v1\_relat\_1 X1) \wedge ((v4\_relat\_1 X1 k5\_numbers) \wedge ((v5\_relat\_1 X1 \\
& (u1\_compos\_1 k1\_scmfsa\_2)) \wedge ((v1\_funct\_1 X1) \wedge (v1\_partfun1 X1 \\
& k5\_numbers)))))) \Rightarrow (\forall X2. ((\neg v1\_xboole\_0 X2) \wedge ((v1\_relat\_1 \\
& X2) \wedge ((v4\_relat\_1 X2 k5\_numbers) \wedge ((v5\_relat\_1 X2 (u1\_compos\_1 \\
& k1\_scmfsa\_2)) \wedge ((v1\_funct\_1 X2) \wedge ((v1\_finset\_1 X2) \wedge (v1\_afinsq\_1 \\
& X2))))))) \Rightarrow (\forall X3. ((v1\_ami\_2 X3) \wedge (m1\_subset\_1 X3 (u1\_struct\_0 \\
& k1\_scmfsa\_2))) \Rightarrow ((r5\_scmfsa7b X2 X0 X1) \Rightarrow ((r4\_scmfsa7b X2 X3) \vee \\
& (\forall X4. (m2\_subset\_1 X4 k1\_numbers k5\_numbers) \Rightarrow (k1\_funct\_1 \\
& (k5\_extpro\_1 np\_3 k1\_scmfsa\_2 (k1\_funct\_4 X1 X2) (k8\_memstr\_0 \\
& np\_3 k1\_scmfsa\_2 X0) X4) X3 = k1\_funct\_1 X0 X3))))))
\end{aligned} \tag{1}$$

Assume the following.

$$m1\_subset\_1 k1\_xboole\_0 k4\_ordinal1 \tag{2}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (3)$$

Assume the following.

$$(v1\_ami\_2 (k4\_scmfsa\_2 k6\_numbers)) \wedge (v1\_scmfsa\_m (k4\_scmfsa\_2 k6\_numbers)) \quad (4)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow ((v1\_ami\_2 (k4\_scmfsa\_2 X0)) \wedge (m1\_subset1 (k4\_scmfsa\_2 X0) (u1\_struct\_0 k1\_scmfsa\_2))) \quad (5)$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v5\_relat\_1 X0 (u1\_compos\_1 k1\_scmfsa\_2)) \wedge (v1\_funct\_1 X0)))) \Rightarrow ((v1\_scmfsa7b X0) \Leftrightarrow (\neg r4\_scmfsa7b X0 (k4\_scmfsa\_2 k6\_numbers))) \quad (6)$$

Assume the following.

$$\forall X0. (m1\_subset1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \quad (7)$$

**Theorem 1**

$$\begin{aligned} & \forall X0. ((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v5\_relat\_1 X0 (u1\_compos\_1 k1\_scmfsa\_2)) \wedge ((v1\_funct\_1 X0) \wedge (v1\_partfun1 X0 k5\_numbers)))))) \Rightarrow (\forall X1. ((v1\_relat\_1 X1) \wedge ((v4\_relat\_1 X1 (u1\_struct\_0 k1\_scmfsa\_2)) \wedge ((v1\_funct\_1 X1) \wedge ((v5\_funct\_1 X1 (k2\_memstr\_0 np\_3 k1\_scmfsa\_2)) \wedge (v1\_partfun1 X1 (u1\_struct\_0 k1\_scmfsa\_2))))))) \Rightarrow (\forall X2. ((\neg v1\_xboole\_0 X2) \wedge ((v1\_relat\_1 X2) \wedge ((v4\_relat\_1 X2 k5\_numbers) \wedge ((v5\_relat\_1 X2 (u1\_compos\_1 k1\_scmfsa\_2)) \wedge ((v1\_funct\_1 X2) \wedge ((v1\_finset\_1 X2) \wedge ((v1\_afinsq\_1 X2) \wedge (v1\_scmfsa7b X2)))))))))) \Rightarrow ((r5\_scmfsa7b X2 X1 X0) \Rightarrow (\forall X3. (m2\_subset1 X3 k1\_numbers k5\_numbers) \Rightarrow (k1\_funct\_1 (k5\_extpro\_1 np\_3 k1\_scmfsa\_2 (k1\_funct\_4 X0 X2) (k8\_memstr\_0 np\_3 k1\_scmfsa\_2 X1) X3) (k4\_scmfsa\_2 k6\_numbers) = k1\_funct\_1 X1 (k4\_scmfsa\_2 k6\_numbers)))))) \end{aligned}$$