

t53\_sf\_mastr  
(TMS8RG5qtBgviinXe9UyBK3AY3o5eXqrDfw)

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Let  $v1\_ami\_2 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_scmf\_sa\_2 : \iota$  be given. Let  $m1\_scmf\_sa\_2 : \iota \Rightarrow o$  be given. 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  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $k14\_scmf\_sa\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k15\_scmf\_sa\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_sf\_mastr : \iota \Rightarrow \iota$  be given. Let  $k2\_sf\_mastr : \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_sf\_mastr : \iota \Rightarrow \iota$  be given. Let  $k5\_scmf\_sa\_m : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v5\_relat\_1 \\ X0 (u1\_compos\_1 k1\_scmf\_sa\_2)) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finset\_1 \\ X0)))))) \Rightarrow (\neg k5\_sf\_mastr X0 \in k2\_sf\_mastr X0) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (r1\_tarski (k2\_tarski X0 X1) X2) \Leftrightarrow ((X0 \in X2) \wedge (X1 \in X2)) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. (m1\_subset\_1 X0 (u1\_compos\_1 k1\_scmf\_sa\_2)) \Rightarrow (\forall X1. \\ ((v1\_relat\_1 X1) \wedge ((v4\_relat\_1 X1 k5\_numbers) \wedge ((v5\_relat\_1 X1 \\ (u1\_compos\_1 k1\_scmf\_sa\_2)) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finset\_1 X1)))))) \Rightarrow \\ ((X0 \in k2\_relset\_1 (u1\_compos\_1 k1\_scmf\_sa\_2) X1) \Rightarrow (r1\_tarski ( \\ k1\_sf\_mastr X0) (k2\_sf\_mastr X1)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1\_ami\_2 X0) \wedge (m1\_subset\_1 X0 (u1\_struct\_0 k1\_scmf\_sa\_2))) \Rightarrow \\
& (\forall X1.((v1\_ami\_2 X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 k1\_scmf\_sa\_2))) \Rightarrow \\
& (\forall X2.(m1\_scmf\_sa\_2 X2) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_compos\_1 \\
& k1\_scmf\_sa\_2)) \Rightarrow (((X3 = k14\_scmf\_sa\_2 X0 X1 X2) \vee (X3 = k15\_scmf\_sa\_2 \\
& X0 X1 X2)) \Rightarrow (k1\_sf\_mastr X3 = k5\_scmf\_sa\_m X1 X0))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (((v1\_ami\_2 X0) \wedge (m1\_subset\_1 X0 (u1\_struct\_0 \\
& k1\_scmf\_sa\_2))) \wedge ((v1\_ami\_2 X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 \\
& k1\_scmf\_sa\_2)))) \Rightarrow (k5\_scmf\_sa\_m X0 X1 = k2\_tarski X0 X1)
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v5\_relat\_1 X1 X0)) \Rightarrow ( \\
& m1\_subset\_1 (k2\_relset\_1 X0 X1) (k1\_zfmisc\_1 X0))
\end{aligned} \tag{7}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((v1\_ami\_2 X0) \wedge (m1\_subset\_1 X0 (u1\_struct\_0 k1\_scmf\_sa\_2))) \Rightarrow \\
& (\forall X1.((v1\_ami\_2 X1) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 k1\_scmf\_sa\_2))) \Rightarrow \\
& (\forall X2.(m1\_scmf\_sa\_2 X2) \Rightarrow (\forall X3.((v1\_relat\_1 X3) \wedge ( \\
& v4\_relat\_1 X3 k5\_numbers) \wedge ((v5\_relat\_1 X3 (u1\_compos\_1 k1\_scmf\_sa\_2)) \wedge \\
& ((v1\_funct\_1 X3) \wedge (v1\_finset\_1 X3)))))) \Rightarrow (((k14\_scmf\_sa\_2 X0 X1 \\
& X2 \in k2\_relset\_1 (u1\_compos\_1 k1\_scmf\_sa\_2) X3) \vee (k15\_scmf\_sa\_2 \\
& X0 X1 X2 \in k2\_relset\_1 (u1\_compos\_1 k1\_scmf\_sa\_2) X3)) \Rightarrow ((k5\_sf\_mastr \\
& X3 \neq X1) \wedge (k5\_sf\_mastr X3 \neq X0))))))
\end{aligned}$$