

## t20\_scmfsa\_m

(TMaFLyye7b5F4rWXPQ8v6hpmBXwbkbbWL9U)

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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  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_scmfsa\_2 : \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  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  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $v1\_scmfsa\_m : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_scmfsa\_2 : \iota \Rightarrow o$  be given. Let  $k18\_scmfsa\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 (u1\_struct\_0 k1\_scmfsa\_2)) \wedge \\
 & ((v1\_funct\_1 X0) \wedge ((v5\_funct\_1 X0 (k2\_memstr\_0 np\_3 k1\_scmfsa\_2)) \wedge \\
 & (v1\_partfun1 X0 (u1\_struct\_0 k1\_scmfsa\_2)))))) \Rightarrow (\forall X1. \\
 & ((v1\_relat\_1 X1) \wedge ((v4\_relat\_1 X1 (u1\_struct\_0 k1\_scmfsa\_2)) \wedge \\
 & ((v1\_funct\_1 X1) \wedge ((v5\_funct\_1 X1 (k2\_memstr\_0 np\_3 k1\_scmfsa\_2)) \wedge \\
 & (v1\_partfun1 X1 (u1\_struct\_0 k1\_scmfsa\_2)))))) \Rightarrow ((\forall X2. \\
 & ((v1\_ami\_2 X2) \wedge (m1\_subset\_1 X2 (u1\_struct\_0 k1\_scmfsa\_2))) \Rightarrow \\
 & (k1\_funct\_1 X0 X2 = k1\_funct\_1 X1 X2)) \wedge (\forall X2. (m1\_scmfsa\_2 \\
 & X2) \Rightarrow (k18\_scmfsa\_2 X0 X2 = k18\_scmfsa\_2 X1 X2))) \Leftrightarrow (k6\_memstr\_0 np\_3 \\
 & k1\_scmfsa\_2 X0 = k6\_memstr\_0 np\_3 k1\_scmfsa\_2 X1))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. ((v1\_ami\_2 X0) \wedge (m1\_subset\_1 X0 (u1\_struct\_0 k1\_scmfsa\_2))) \Rightarrow \\
 & ((v1\_scmfsa\_m X0) \Leftrightarrow (X0 = k4\_scmfsa\_2 k6\_numbers))
 \end{aligned} \tag{2}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 (u1\_struct\_0 k1\_scmfsa\_2)) \wedge \\ & ((v1\_funct\_1 X0) \wedge ((v5\_funct\_1 X0 (k2\_memstr\_0 np\_3 k1\_scmfsa\_2)) \wedge \\ & (v1\_partfun1 X0 (u1\_struct\_0 k1\_scmfsa\_2)))))) \Rightarrow (\forall X1. \\ & ((v1\_relat\_1 X1) \wedge ((v4\_relat\_1 X1 (u1\_struct\_0 k1\_scmfsa\_2)) \wedge \\ & ((v1\_funct\_1 X1) \wedge ((v5\_funct\_1 X1 (k2\_memstr\_0 np\_3 k1\_scmfsa\_2)) \wedge \\ & (v1\_partfun1 X1 (u1\_struct\_0 k1\_scmfsa\_2)))))) \Rightarrow (((k1\_funct\_1 \\ X0 (k4\_scmfsa\_2 k6\_numbers) = k1\_funct\_1 X1 (k4\_scmfsa\_2 k6\_numbers)) \wedge \\ & ((\forall X2.((v1\_ami\_2 X2) \wedge ((\neg v1\_scmfsa\_m X2) \wedge (m1\_subset\_1 \\ X2 (u1\_struct\_0 k1\_scmfsa\_2)))) \Rightarrow (k1\_funct\_1 X0 X2 = k1\_funct\_1 \\ X1 X2)) \wedge (\forall X2.(m1\_scmfsa\_2 X2 \Rightarrow (k18\_scmfsa\_2 X0 X2 = k18\_scmfsa\_2 \\ X1 X2)))) \Rightarrow (k6\_memstr\_0 np\_3 k1\_scmfsa\_2 X0 = k6\_memstr\_0 np\_3 \\ & k1\_scmfsa\_2 X1))) \end{aligned}$$