

# t42\_scmfsa\_2 (TMVVyEeEAqth- WMQuqroT2fCCRQiVbHVCUGC)

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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  $v1\_ami\_2 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l1\_compos\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (1)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_struct\_0 X0)) \Rightarrow (\neg v1\_xboole\_0 (u1\_struct\_0 X0)) \quad (2)$$

Assume the following.

$$(\neg v2\_struct\_0 k1\_scmfsa\_2) \wedge ((v2\_memstr\_0 k1\_scmfsa\_2 np\_3) \wedge (v1\_extpro\_1 k1\_scmfsa\_2 np\_3)) \quad (3)$$

Assume the following.

$$\forall X0. (l2\_struct\_0 X0) \Rightarrow (l1\_struct\_0 X0) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (l1\_memstr\_0 X1 X0) \Rightarrow (l2\_struct\_0 X1) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (l1\_extpro\_1 X1 X0) \Rightarrow ((l1\_memstr\_0 X1 X0) \wedge (l1\_compos\_1 X1)) \quad (6)$$

Assume the following.

$$(v1\_extpro\_1\ k1\_scmfsa\_2\ np\_3) \wedge (l1\_extpro\_1\ k1\_scmfsa\_2\ np\_3) \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1\ X1) \wedge (v4\_relat\_1\ X1\ X0)) \Rightarrow (v1\_partfun1\ X1\ X0) \Leftrightarrow (k1\_relset\_1\ X0\ X1 = X0) \quad (8)$$

**Theorem 1**

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