

# t1\_scmring2 (TMUxRDgYHCpS- Gby2G1nN4vREZmWxgYoW4wY)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v13\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v2\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v3\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v4\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v3\_group\_1 : \iota \Rightarrow o$  be given. Let  $v4\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $v5\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $l6\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v1\_ami\_2 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_scmring2 : \iota \Rightarrow \iota$  be given. Let  $k8\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_ami\_3 : \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_ami\_2 : \iota$  be given. Let  $k1\_ami\_2 : \iota$  be given. Let  $v1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_2 : \iota$  be given. Let  $l1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u2\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $u1\_compos\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_scmringi : \iota \Rightarrow \iota$  be given. Let  $r1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_ami\_2 : \iota$  be given. Let  $u2\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_scmring1 : \iota \Rightarrow \iota$  be given. Let  $u1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_scmring1 : \iota \Rightarrow \iota$  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.

$$k8\_struct\_0 k1\_ami\_3 = k2\_ami\_2 \quad (2)$$

Assume the following.

$$m1\_subset\_1 k2\_ami\_2 (k1\_zfmisc\_1 k1\_ami\_2) \quad (3)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v3\_group\_1 X0) \wedge ((v4\_vectsp\_1 X0) \wedge ((v5\_vectsp\_1 X0) \wedge (l6\_algstr\_0 X0)))))))) \Rightarrow ((v1\_extpro\_1 (k1\_scmring2 X0) np\_2) \wedge (l1\_extpro\_1 (k1\_scmring2 X0) np\_2)) \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\
& X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v3\_group\_1 X0) \wedge \\
& (v4\_vectsp\_1 X0) \wedge ((v5\_vectsp\_1 X0) \wedge (l6\_algstr\_0 X0)))))))) \Rightarrow \\
& (\forall X1.((v1\_extpro\_1 X1 \text{ np\_2}) \wedge (l1\_extpro\_1 X1 \text{ np\_2})) \Rightarrow \\
& ((X1 = k1\_scmring2 X0) \Leftrightarrow ((u1\_struct\_0 X1 = k1\_ami\_2) \wedge ((u2\_struct\_0 \\
& X1 = k5\_numbers) \wedge ((u1\_compos\_1 X1 = k1\_scmringi X0) \wedge ((r1\_funct\_2 \\
& (u1\_struct\_0 X1) \text{ np\_2 } k1\_ami\_2 \text{ np\_2 } (u1\_memstr\_0 \text{ np\_2 } X1) \text{ k3\_ami\_2}) \wedge \\
& ((u2\_memstr\_0 \text{ np\_2 } X1 = k1\_scmring1 X0) \wedge (u1\_extpro\_1 \text{ np\_2 } X1 = \\
& k8\_scmring1 X0)))))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.(v1\_ami\_2 X0) \Leftrightarrow (X0 \in k2\_ami\_2) \tag{6}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0. \forall X1. ((\neg v2\_struct\_0 X1) \wedge ((v13\_algstr\_0 X1) \wedge \\
& ((v2\_rlvect\_1 X1) \wedge ((v3\_rlvect\_1 X1) \wedge ((v4\_rlvect\_1 X1) \wedge ((v3\_group\_1 \\
& X1) \wedge ((v4\_vectsp\_1 X1) \wedge ((v5\_vectsp\_1 X1) \wedge (l6\_algstr\_0 X1)))))))) \Rightarrow \\
& (((v1\_ami\_2 X0) \wedge (m1\_subset\_1 X0 (u1\_struct\_0 (k1\_scmring2 X1)))) \Leftrightarrow \\
& (X0 \in k8\_struct\_0 k1\_ami\_3))
\end{aligned}$$