

t27\_memstr\_0 (TMR-  
LzVCM5Ykpabp1fVD1gC8MQDK2ELx2BYH)

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_setfam\_1 : \iota \Rightarrow o$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l1\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  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  $k4\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_4 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1\_setfam\_1 X0) \Rightarrow (\forall X1. ((\neg v2\_struct\_0 X1) \wedge \\ & ((v2\_memstr\_0 X1 X0) \wedge (v3\_memstr\_0 X1 X0) \wedge (l1\_memstr\_0 X1 X0)))) \Rightarrow \\ & (\forall X2. (v7\_ordinal1 X2) \Rightarrow (k4\_struct\_0 X1 \in k9\_xtuple\_0 (k7\_memstr\_0 \\ & X0 X1 X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow (\forall X2. \\ & ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \Rightarrow ((X0 \in k9\_xtuple\_0 (k1\_funct\_4 \\ & X1 X2)) \Leftrightarrow ((X0 \in k9\_xtuple\_0 X1) \vee (X0 \in k9\_xtuple\_0 X2)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1\_setfam\_1 X0) \wedge (((\neg v2\_struct\_0 \\ & X1) \wedge ((v2\_memstr\_0 X1 X0) \wedge (v3\_memstr\_0 X1 X0) \wedge (l1\_memstr\_0 X1 \\ & X0)))) \wedge (v7\_ordinal1 X2)) \Rightarrow ((v1\_relat\_1 (k7\_memstr\_0 X0 X1 X2)) \wedge \\ & ((v4\_relat\_1 (k7\_memstr\_0 X0 X1 X2) (u1\_struct\_0 X1)) \wedge ((v1\_funct\_1 \\ & (k7\_memstr\_0 X0 X1 X2)) \wedge (v5\_funct\_1 (k7\_memstr\_0 X0 X1 X2) (k2\_memstr\_0 \\ & X0 X1)))))) \end{aligned} \tag{3}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(\neg v1\_setfam\_1\ X1) \Rightarrow ( \\ & \forall X2.((\neg v2\_struct\_0\ X2) \wedge ((v2\_memstr\_0\ X2\ X1) \wedge ((v3\_memstr\_0 \\ & \quad X2\ X1) \wedge (l1\_memstr\_0\ X2\ X1)))) \Rightarrow (\forall X3.((v1\_relat\_1\ X3) \wedge ( \\ & \quad (v4\_relat\_1\ X3\ (u1\_struct\_0\ X2)) \wedge ((v1\_funct\_1\ X3) \wedge (v5\_funct\_1 \\ & \quad X3\ (k2\_memstr\_0\ X1\ X2)))) \Rightarrow (k4\_struct\_0\ X2 \in k9\_xtuple\_0\ (k1\_funct\_4 \\ & \quad X3\ (k7\_memstr\_0\ X1\ X2\ X0)))))) \end{aligned}$$