

# t40\_memstr\_0 (TMHM- mzD3yZBmx3qDgX8FrjkSCUXVs8VDwzB)

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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  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k7\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v5\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1\_setfam\_1 X0) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge \\ & ((v2\_memstr\_0 X1 X0) \wedge ((v3\_memstr\_0 X1 X0) \wedge (l1\_memstr\_0 X1 X0)))) \Rightarrow \\ & (\forall X2.(v7\_ordinal1 X2) \Rightarrow (\forall X3.((v1\_relat\_1 X3) \wedge ( \\ & (v4\_relat\_1 X3 (u1\_struct\_0 X1)) \wedge ((v1\_funct\_1 X3) \wedge (v5\_funct\_1 \\ & X3 (k2\_memstr\_0 X0 X1)))))) \Rightarrow ((v5\_memstr\_0 X3 X0 X1 X2) \Leftrightarrow (r1\_tarski \\ & (k7\_memstr\_0 X0 X1 X2) X3)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1\_setfam\_1 X0) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge \\ & ((v2\_memstr\_0 X1 X0) \wedge ((v3\_memstr\_0 X1 X0) \wedge (l1\_memstr\_0 X1 X0)))) \Rightarrow \\ & (\forall X2.(v7\_ordinal1 X2) \Rightarrow (\forall X3.((v1\_relat\_1 X3) \wedge ( \\ & (v4\_relat\_1 X3 (u1\_struct\_0 X1)) \wedge ((v1\_funct\_1 X3) \wedge (v5\_funct\_1 \\ & X3 (k2\_memstr\_0 X0 X1)))))) \Rightarrow ((v5\_memstr\_0 X3 X0 X1 X2) \Leftrightarrow ((k4\_struct\_0 \\ & X1 \in k9\_xtuple\_0 X3) \wedge (k5\_memstr\_0 X0 X1 X3 = X2)))) \end{aligned} \tag{2}$$

## Theorem 1

$$\begin{aligned} & \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(\neg v1\_setfam\_1 X1) \Rightarrow ( \\ & \forall X2.((\neg v2\_struct\_0 X2) \wedge ((v2\_memstr\_0 X2 X1) \wedge ((v3\_memstr\_0 \\ & X2 X1) \wedge (l1\_memstr\_0 X2 X1)))) \Rightarrow (\forall X3.((v1\_relat\_1 X3) \wedge ( \\ & (v4\_relat\_1 X3 (u1\_struct\_0 X2)) \wedge ((v1\_funct\_1 X3) \wedge (v5\_funct\_1 \\ & X3 (k2\_memstr\_0 X1 X2)))))) \Rightarrow ((r1\_tarski (k7\_memstr\_0 X1 X2 X0) X3) \Rightarrow \\ & (k5\_memstr\_0 X1 X2 X3 = X0)))) \end{aligned}$$