

t59\_memstr\_0  
(TMQvowsj3aJdY3oXAByegeb25fN3XB4svqmN)

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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  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k7\_nat\_d : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1\_setfam\_1 X0) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge \\ & ((v2\_memstr\_0 X1 X0) \wedge (v3\_memstr\_0 X1 X0) \wedge (l1\_memstr\_0 X1 X0)))) \Rightarrow \\ & (\forall X2.((v1\_relat\_1 X2) \wedge ((v4\_relat\_1 X2 (u1\_struct\_0 X1)) \wedge \\ & ((v1\_funct\_1 X2) \wedge (v5\_funct\_1 X2 (k2\_memstr\_0 X0 X1)))))) \Rightarrow (\forall X3. \\ & (v7\_ordinal1 X3) \Rightarrow (k5\_memstr\_0 X0 X1 (k9\_memstr\_0 X0 X1 X2 X3) = k2\_nat\_1 \\ & (k5\_memstr\_0 X0 X1 X2 X3)))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (k7\_nat\_d (k2\_xcmplx\_0 X0 X1) X1 = X0)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2.(m2\_subset\_1 X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \tag{3}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k5\_numbers)\wedge(v7\_ordinal1 X1))\Rightarrow(k2\_nat\_1 X0 X1 = k2\_xcmplx\_0 X0 X1) \quad (5)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1)\wedge(v3\_ordinal1 k4\_ordinal1) \quad (6)$$

Assume the following.

$$m1\_subset\_1 k5\_numbers (k1\_zfmisc\_1 k1\_numbers) \quad (7)$$

Assume the following.

$$\begin{aligned} &\forall X0.\forall X1.\forall X2.((\neg v1\_setfam\_1 X0)\wedge(((\neg v2\_struct\_0 \\ &X1)\wedge((v2\_memstr\_0 X1 X0)\wedge((v3\_memstr\_0 X1 X0)\wedge(l1\_memstr\_0 X1 \\ &X0))))\wedge((v1\_relat\_1 X2)\wedge((v4\_relat\_1 X2 (u1\_struct\_0 X1))\wedge( \\ &(v1\_funct\_1 X2)\wedge(v5\_funct\_1 X2 (k2\_memstr\_0 X0 X1))))))\Rightarrow(m2\_subset\_1 \\ &(k5\_memstr\_0 X0 X1 X2) k1\_numbers k5\_numbers) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1)\Rightarrow(v7\_ordinal1 X0) \quad (9)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0)\Rightarrow(\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))\Rightarrow(v1\_xboole\_0 X1)) \quad (10)$$

**Theorem 1**

$$\begin{aligned} &\forall X0.(\neg v1\_setfam\_1 X0)\Rightarrow(\forall X1.((\neg v2\_struct\_0 X1)\wedge \\ &((v2\_memstr\_0 X1 X0)\wedge((v3\_memstr\_0 X1 X0)\wedge(l1\_memstr\_0 X1 X0))))\Rightarrow \\ &(\forall X2.((v1\_relat\_1 X2)\wedge((v4\_relat\_1 X2 (u1\_struct\_0 X1))\wedge \\ &((v1\_funct\_1 X2)\wedge(v5\_funct\_1 X2 (k2\_memstr\_0 X0 X1))\wedge(v1\_partfun1 \\ &X2 (u1\_struct\_0 X1))))))\Rightarrow(\forall X3.(v7\_ordinal1 X3)\Rightarrow(k7\_nat\_d \\ &(k5\_memstr\_0 X0 X1 (k9\_memstr\_0 X0 X1 X2 X3)) X3 = k5\_memstr\_0 X0 X1 \\ &X2))) \end{aligned}$$