

t12\_msaterm  
(TMXicHG8CrnR5owP1jCaJrYVhSH9kccHjMT)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v11\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_msualg\_1 : \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v2\_relat\_1 : \iota \Rightarrow o$  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  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k7\_msafree : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_msaterm : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k4\_dtconstr : \iota \Rightarrow \iota$  be given. Let  $k5\_msafree : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarski X0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2\_struct\_0 X0) \wedge (\neg v11\_struct\_0 X0) \wedge (l1\_msualg\_1 X0)) \wedge ((v1\_relat\_1 X1) \wedge (v2\_relat\_1 X1) \wedge \\ & ((v4\_relat\_1 X1 (u1\_struct\_0 X0)) \wedge (v1\_funct\_1 X1) \wedge (v1\_partfun1 X1 (u1\_struct\_0 X0)))))) \wedge (m1\_subset\_1 X2 (u1\_struct\_0 X0))) \Rightarrow \\ & (m1\_subset\_1 (k7\_msafree X0 X1 X2) (k1\_zfmisc\_1 (k4\_dtconstr (k5\_msafree X0 X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge (\neg v11\_struct\_0 X0) \wedge (l1\_msualg\_1 X0)) \Rightarrow (\forall X1. ((v1\_relat\_1 X1) \wedge ((v4\_relat\_1 X1 (u1\_struct\_0 X0)) \wedge (v1\_funct\_1 X1) \wedge (v1\_partfun1 X1 (u1\_struct\_0 X0)))))) \Rightarrow (k1\_msaterm X0 X1 = k4\_dtconstr (k5\_msafree X0 X1)) \quad (3)$$

**Theorem 1**

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (\neg v11\_struct\_0 X0) \wedge (l1\_msualg\_1 X0)) \Rightarrow (\forall X1. ((v1\_relat\_1 X1) \wedge ((v2\_relat\_1 X1) \wedge ((v4\_relat\_1 X1 (u1\_struct\_0 X0)) \wedge (v1\_funct\_1 X1) \wedge (v1\_partfun1 X1 (u1\_struct\_0 X0)))))) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (r1\_tarski (k7\_msafree X0 X1 X2) (k1\_msaterm X0 X1)))) \end{aligned}$$