

t38\_circترم1 (TM-  
Pvpyc2LBMJMyxDRX3acjnJeJwNY4VrNUr)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_msualg\_1 : \iota \Rightarrow o$  be given. Let  $v4\_msualg\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l3\_msualg\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r5\_circترم1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_partfun1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $u4\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_funct\_1 : \iota \Rightarrow \iota$  be given. Let  $k4\_relat\_1 : \iota \Rightarrow \iota$  be given. Let  $r4\_circترم1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. k2\_funct\_1 (k4\_relat\_1 X0) = k4\_relat\_1 X0 \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_msualg\_1 X0)) \Rightarrow (\forall X1. \\ & ((v4\_msualg\_1 X1 X0) \wedge (l3\_msualg\_1 X1 X0)) \Rightarrow (r4\_circترم1 X0 X0 ( \\ & k6\_partfun1 (u1\_struct\_0 X0) (k6\_partfun1 (u4\_struct\_0 X0) \\ & X1 X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. k6\_partfun1 X0 = k4\_relat\_1 X0 \quad (3)$$

Assume the following.

$$\forall X0. (v1\_relat\_1 (k4\_relat\_1 X0)) \wedge (v1\_funct\_1 (k4\_relat\_1 X0)) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_msualg\_1 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2\_struct\_0 X1) \wedge (l1\_msualg\_1 X1)) \Rightarrow (\forall X2. ((v1\_relat\_1 \\ & X2) \wedge (v1\_funct\_1 X2)) \Rightarrow (\forall X3. ((v1\_relat\_1 X3) \wedge (v1\_funct\_1 \\ & X3)) \Rightarrow (\forall X4. ((v4\_msualg\_1 X4 X0) \wedge (l3\_msualg\_1 X4 X0)) \Rightarrow ( \\ & \forall X5. ((v4\_msualg\_1 X5 X1) \wedge (l3\_msualg\_1 X5 X1)) \Rightarrow ((r5\_circترم1 \\ & X0 X1 X2 X3 X4 X5) \Leftrightarrow ((r4\_circترم1 X0 X1 X2 X3 X4 X5) \wedge (r4\_circترم1 X1 \\ & X0 (k2\_funct\_1 X2) (k2\_funct\_1 X3) X5 X4)))))) \end{aligned} \quad (5)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_msualg\_1 X0)) \Rightarrow (\forall X1. \\ & ((v4\_msualg\_1 X1 X0) \wedge (l3\_msualg\_1 X1 X0)) \Rightarrow (r5\_circrm1 X0 X0 ( \\ & k6\_partfun1 (u1\_struct\_0 X0)) (k6\_partfun1 (u4\_struct\_0 X0) \\ & X1 X1)) \end{aligned}$$