

t22\_msuhom\_1  
(TMPUz39jP5SWZxBy781FfyssNMr36HZaer3)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_unialg\_1 : \iota \Rightarrow o$  be given. Let  $v3\_unialg\_1 : \iota \Rightarrow o$  be given. Let  $v4\_unialg\_1 : \iota \Rightarrow o$  be given. Let  $l1\_unialg\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_unialg\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r2\_msualg\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_msualg\_1 : \iota \Rightarrow \iota$  be given. Let  $k9\_msualg\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_msuhom\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_msuhom\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r3\_alg\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v11\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_msualg\_1 : \iota \Rightarrow o$  be given. Let  $l1\_msualg\_1 : \iota \Rightarrow o$  be given. Let  $v3\_msualg\_1 : \iota \Rightarrow \iota \Rightarrow o$  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  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k16\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $r1\_msualg\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_alg\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m2\_pboole : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u4\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_msualg\_1 : \iota \Rightarrow \iota$  be given. Let  $k6\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u2\_msualg\_1 : \iota \Rightarrow \iota$  be given. Let  $g3\_msualg\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v7\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v13\_struct\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $v5\_msualg\_1 : \iota \Rightarrow o$  be given. Let  $l5\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $k8\_msualg\_1 : \iota \Rightarrow \iota$  be given. Let  $k7\_msualg\_1 : \iota \Rightarrow \iota$  be given. Let  $v2\_relat\_1 : \iota \Rightarrow o$  be given. Let  $u3\_msualg\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_msualg\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_unialg\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k3\_finseq\_2 : \iota \Rightarrow \iota$  be given. Let  $k7\_finseq\_2 : \iota \Rightarrow \iota$  be given. Let  $k1\_margrel1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be

given. Let  $u4\_msualg\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((\neg v11\_struct\_0 X0) \wedge ((v1\_msualg\_1 X0) \wedge (l1\_msualg\_1 X0)))) \Rightarrow (\forall X1.((v3\_msualg\_1 X1 X0) \wedge ((v4\_msualg\_1 X1 X0) \wedge (l3\_msualg\_1 X1 X0)))) \Rightarrow (X1 = k1\_msuhom\_1 X0 X0 X1)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. k1\_funct\_1 (k16\_funcop\_1 X0 X1) X0 = X1 \quad (2)$$

Assume the following.

$$\forall X0. k2\_tarski X0 X0 = k1\_tarski X0 \quad (3)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_unialg\_1 X0) \wedge ((v3\_unialg\_1 X0) \wedge ((v4\_unialg\_1 X0) \wedge (l1\_unialg\_1 X0))))) \Rightarrow (\forall X1. ((\neg v2\_struct\_0 X1) \wedge ((v2\_unialg\_1 X1) \wedge ((v3\_unialg\_1 X1) \wedge ((v4\_unialg\_1 X1) \wedge (l1\_unialg\_1 X1))))) \Rightarrow (\forall X2. ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 (u1\_struct\_0 X0) (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X1)))))) \Rightarrow (((r1\_unialg\_2 X0 X1) \wedge (r1\_msualg\_3 (k6\_msualg\_1 X0) (k9\_msualg\_1 X0) (k1\_msuhom\_1 (k6\_msualg\_1 X0) (k6\_msualg\_1 X1) (k9\_msualg\_1 X1)) (k2\_msuhom\_1 X0 X1 X2)))) \Rightarrow (r1\_alg\_1 X0 X1 X2)))) \quad (4)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_unialg\_1 X0) \wedge ((v3\_unialg\_1 X0) \wedge ((v4\_unialg\_1 X0) \wedge (l1\_unialg\_1 X0))))) \Rightarrow (\forall X1. ((\neg v2\_struct\_0 X1) \wedge ((v2\_unialg\_1 X1) \wedge ((v3\_unialg\_1 X1) \wedge ((v4\_unialg\_1 X1) \wedge (l1\_unialg\_1 X1))))) \Rightarrow ((r1\_unialg\_2 X0 X1) \Rightarrow (k6\_msualg\_1 X0 = k6\_msualg\_1 X1))) \quad (5)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v5\_relat\_1 X1 X0)) \Rightarrow (k2\_relset\_1 X0 X1 = k10\_xtuple\_0 X1) \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (((\neg v2\_struct\_0 X0) \wedge (l1\_msualg\_1 X0)) \wedge (((v1\_relat\_1 X1) \wedge ((v4\_relat\_1 X1 (u1\_struct\_0 X0)) \wedge ((v1\_funct\_1 X1) \wedge (v1\_partfun1 X1 (u1\_struct\_0 X0)))))) \wedge (m2\_pboole X2 (u4\_struct\_0 X0) (k3\_relat\_1 (u1\_msualg\_1 X0) (k6\_finseq\_2 (u1\_struct\_0 X0) X1)) (k3\_relat\_1 (u2\_msualg\_1 X0) X1)))) \Rightarrow (\forall X3. \forall X4. \forall X5. (g3\_msualg\_1 X0 X1 X2 = g3\_msualg\_1 X3 X4 X5) \Rightarrow ((X0 = X3) \wedge ((X1 = X4) \wedge (X2 = X5)))) \quad (8)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_unialg\_1 X0) \wedge ((v3\_unialg\_1 X0) \wedge ((v4\_unialg\_1 X0) \wedge (l1\_unialg\_1 X0)))))) \Rightarrow ((v3\_msualg\_1 (k9\_msualg\_1 X0) (k6\_msualg\_1 X0)) \wedge (v4\_msualg\_1 (k9\_msualg\_1 X0) (k6\_msualg\_1 X0))) \quad (9)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_unialg\_1 X0) \wedge ((v3\_unialg\_1 X0) \wedge ((v4\_unialg\_1 X0) \wedge (l1\_unialg\_1 X0)))))) \Rightarrow ((v7\_struct\_0 (k6\_msualg\_1 X0)) \wedge ((\neg v11\_struct\_0 (k6\_msualg\_1 X0)) \wedge ((v13\_struct\_0 (k6\_msualg\_1 X0) np\_1) \wedge ((v1\_msualg\_1 (k6\_msualg\_1 X0)) \wedge (v5\_msualg\_1 (k6\_msualg\_1 X0))))))) \quad (10)$$

Assume the following.

$$\forall X0.(l5\_struct\_0 X0) \Rightarrow (l1\_struct\_0 X0) \quad (11)$$

Assume the following.

$$\forall X0.(l1\_msualg\_1 X0) \Rightarrow (l5\_struct\_0 X0) \quad (12)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_unialg\_1 X0) \wedge ((v3\_unialg\_1 X0) \wedge ((v4\_unialg\_1 X0) \wedge (l1\_unialg\_1 X0)))))) \Rightarrow ((v3\_msualg\_1 (k9\_msualg\_1 X0) (k6\_msualg\_1 X0)) \wedge (l3\_msualg\_1 (k9\_msualg\_1 X0) (k6\_msualg\_1 X0))) \quad (13)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_unialg\_1 X0) \wedge ((v3\_unialg\_1 X0) \wedge ((v4\_unialg\_1 X0) \wedge (l1\_unialg\_1 X0)))))) \Rightarrow (m2\_pboole (k8\_msualg\_1 X0) (u4\_struct\_0 (k6\_msualg\_1 X0)) (k3\_relat\_1 (u1\_msualg\_1 (k6\_msualg\_1 X0)) (k6\_finseq\_2 (u1\_struct\_0 (k6\_msualg\_1 X0)) (k7\_msualg\_1 X0))) (k3\_relat\_1 (u2\_msualg\_1 (k6\_msualg\_1 X0)) (k7\_msualg\_1 X0))) \quad (14)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_unialg\_1 X0) \wedge ((v3\_unialg\_1 X0) \wedge ((v4\_unialg\_1 X0) \wedge (l1\_unialg\_1 X0)))))) \Rightarrow ((v1\_relat\_1 (k7\_msualg\_1 X0)) \wedge ((v2\_relat\_1 (k7\_msualg\_1 X0)) \wedge ((v4\_relat\_1 (k7\_msualg\_1 X0) (u1\_struct\_0 (k6\_msualg\_1 X0))) \wedge ((v1\_funct\_1 (k7\_msualg\_1 X0)) \wedge (v1\_partfun1 (k7\_msualg\_1 X0) (u1\_struct\_0 (k6\_msualg\_1 X0))))))) \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_unialg\_1 X0) \wedge ((v3\_unialg\_1 \\ X0) \wedge ((v4\_unialg\_1 X0) \wedge (l1\_unialg\_1 X0)))))) \Rightarrow ((v7\_struct\_0 ( \\ k6\_msualg\_1 X0)) \wedge ((\neg v11\_struct\_0 (k6\_msualg\_1 X0)) \wedge ((v1\_msualg\_1 \\ (k6\_msualg\_1 X0)) \wedge ((v5\_msualg\_1 (k6\_msualg\_1 X0)) \wedge (l1\_msualg\_1 \\ (k6\_msualg\_1 X0))))))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (((\neg v2\_struct\_0 X0) \wedge ((v2\_unialg\_1 \\ X0) \wedge ((v3\_unialg\_1 X0) \wedge ((v4\_unialg\_1 X0) \wedge (l1\_unialg\_1 X0)))))) \wedge \\ (((\neg v2\_struct\_0 X1) \wedge ((v2\_unialg\_1 X1) \wedge ((v3\_unialg\_1 X1) \wedge ( \\ v4\_unialg\_1 X1) \wedge (l1\_unialg\_1 X1)))))) \wedge ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 \\ X2 (u1\_struct\_0 X0) (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X1))))))) \Rightarrow (m2\_pboole \\ (k2\_msuhom\_1 X0 X1 X2) (u1\_struct\_0 (k6\_msualg\_1 X0)) (u3\_msualg\_1 \\ (k6\_msualg\_1 X0) (k9\_msualg\_1 X0)) (u3\_msualg\_1 (k6\_msualg\_1 \\ X0) (k1\_msuhom\_1 (k6\_msualg\_1 X0) (k6\_msualg\_1 X1) (k9\_msualg\_1 \\ X1)))) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_unialg\_1 X0) \wedge ((v3\_unialg\_1 \\ X0) \wedge ((v4\_unialg\_1 X0) \wedge (l1\_unialg\_1 X0)))))) \Rightarrow (k7\_msualg\_1 X0 = \\ k16\_funcop\_1 k6\_numbers (u1\_struct\_0 X0)) \end{aligned} \quad (18)$$

Assume the following.

$$\forall X0. \forall X1. k16\_funcop\_1 X0 X1 = k7\_funcop\_1 (k1\_tarski \\ X0) X1 \quad (19)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((\neg v11\_struct\_0 X0) \wedge (l1\_msualg\_1 \\ X0))) \Rightarrow (\forall X1. (l3\_msualg\_1 X1 X0) \Rightarrow (\forall X2. (l3\_msualg\_1 \\ X2 X0) \Rightarrow (\forall X3. (m2\_pboole X3 (u1\_struct\_0 X0) (u3\_msualg\_1 \\ X0 X1) (u3\_msualg\_1 X0 X2)) \Rightarrow ((r2\_msualg\_3 X0 X1 X2 X3) \Leftrightarrow ((r1\_msualg\_3 \\ X0 X1 X2 X3) \wedge (v2\_msualg\_3 X3 (u1\_struct\_0 X0) (u3\_msualg\_1 X0 X1) \\ (u3\_msualg\_1 X0 X2))))))) \end{aligned} \quad (20)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_unialg\_1 X0) \wedge ((v3\_unialg\_1 \\
& X0) \wedge ((v4\_unialg\_1 X0) \wedge (l1\_unialg\_1 X0)))))) \Rightarrow (\forall X1.((v7\_struct\_0 \\
& X1) \wedge ((\neg v11\_struct\_0 X1) \wedge ((v1\_msualg\_1 X1) \wedge ((v5\_msualg\_1 X1) \wedge \\
& (l1\_msualg\_1 X1)))))) \Rightarrow ((X1 = k6\_msualg\_1 X0) \Leftrightarrow ((u1\_struct\_0 X1 = \\
& k1\_tarski k6\_numbers) \wedge ((u4\_struct\_0 X1 = k4\_finseq\_1 (k1\_unialg\_1 \\
& X0)) \wedge ((u1\_msualg\_1 X1 = k1\_partfun1 k5\_numbers k5\_numbers k5\_numbers \\
& (k3\_finseq\_2 (k1\_tarski k6\_numbers)) (k1\_unialg\_1 X0) (k7\_finseq\_2 \\
& k6\_numbers)) \wedge (u2\_msualg\_1 X1 = k1\_margrel1 k5\_numbers (k4\_finseq\_1 \\
& (k1\_unialg\_1 X0) k6\_numbers))))))
\end{aligned} \tag{21}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_unialg\_1 X0) \wedge ((v3\_unialg\_1 \\
& X0) \wedge ((v4\_unialg\_1 X0) \wedge (l1\_unialg\_1 X0)))))) \Rightarrow (\forall X1.((\neg \\
& v2\_struct\_0 X1) \wedge ((v2\_unialg\_1 X1) \wedge ((v3\_unialg\_1 X1) \wedge ((v4\_unialg\_1 \\
& X1) \wedge (l1\_unialg\_1 X1)))))) \Rightarrow (\forall X2.((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 \\
& X2 (u1\_struct\_0 X0) (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\
& (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X1)))))) \Rightarrow ((k6\_msualg\_1 \\
& X0 = k6\_msualg\_1 X1) \Rightarrow (k2\_msuhom\_1 X0 X1 X2 = k16\_funcop\_1 k6\_numbers \\
& X2))))
\end{aligned} \tag{22}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge ((v4\_relat\_1 X1 X0) \wedge ( \\
& (v1\_funct\_1 X1) \wedge (v1\_partfun1 X1 X0)))) \Rightarrow (\forall X2. ((v1\_relat\_1 \\
& X2) \wedge ((v4\_relat\_1 X2 X0) \wedge ((v1\_funct\_1 X2) \wedge (v1\_partfun1 X2 X0)))) \Rightarrow \\
& (\forall X3. (m2\_pboole X3 X0 X1 X2) \Rightarrow ((v2\_msualg\_3 X3 X0 X1 X2) \Leftrightarrow ( \\
& \forall X4. (X4 \in X0) \Rightarrow (k10\_xtuple\_0 (k1\_funct\_1 X3 X4) = k1\_funct\_1 \\
& X2 X4))))))
\end{aligned} \tag{23}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_unialg\_1 X0) \wedge ((v3\_unialg\_1 \\
& X0) \wedge ((v4\_unialg\_1 X0) \wedge (l1\_unialg\_1 X0)))))) \Rightarrow (\forall X1. ((\neg \\
& v2\_struct\_0 X1) \wedge ((v2\_unialg\_1 X1) \wedge ((v3\_unialg\_1 X1) \wedge ((v4\_unialg\_1 \\
& X1) \wedge (l1\_unialg\_1 X1)))))) \Rightarrow (\forall X2. ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 \\
& X2 (u1\_struct\_0 X0) (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\
& (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X1)))))) \Rightarrow ((r3\_alg\_1 \\
& X0 X1 X2) \Leftrightarrow ((r1\_alg\_1 X0 X1 X2) \wedge (k2\_relset\_1 (u1\_struct\_0 X1) X2 = \\
& u1\_struct\_0 X1))))))
\end{aligned} \tag{24}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (X2 = k2\_tarski X0 X1) \Leftrightarrow (\forall X3. \\
& (X3 \in X2) \Leftrightarrow ((X3 = X0) \vee (X3 = X1)))
\end{aligned} \tag{25}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_unialg\_1 X0) \wedge ((v3\_unialg\_1 X0) \wedge ((v4\_unialg\_1 X0) \wedge (l1\_unialg\_1 X0)))))) \Rightarrow (k9\_msualg\_1 X0 = g3\_msualg\_1 (k6\_msualg\_1 X0) (k7\_msualg\_1 X0) (k8\_msualg\_1 X0)) \quad (26)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow ((v4\_relat\_1 X2 X0) \wedge (v5\_relat\_1 X2 X1)) \quad (27)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v1\_relat\_1 X2) \quad (28)$$

Assume the following.

$$\forall X0. (l1\_struct\_0 X0) \Rightarrow ((v13\_struct\_0 X0 np\_1) \Rightarrow ((\neg v2\_struct\_0 X0) \wedge (v7\_struct\_0 X0))) \quad (29)$$

Assume the following.

$$\forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge (l1\_msualg\_1 X0)) \wedge (l3\_msualg\_1 X1 X0)) \Rightarrow ((v3\_msualg\_1 X1 X0) \Rightarrow (X1 = g3\_msualg\_1 X0 (u3\_msualg\_1 X0 X1) (u4\_msualg\_1 X0 X1))) \quad (30)$$

**Theorem 1**

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_unialg\_1 X0) \wedge ((v3\_unialg\_1 X0) \wedge ((v4\_unialg\_1 X0) \wedge (l1\_unialg\_1 X0)))))) \Rightarrow (\forall X1. ((\neg v2\_struct\_0 X1) \wedge ((v2\_unialg\_1 X1) \wedge ((v3\_unialg\_1 X1) \wedge ((v4\_unialg\_1 X1) \wedge (l1\_unialg\_1 X1)))))) \Rightarrow (\forall X2. ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 (u1\_struct\_0 X0) (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X1)))))) \Rightarrow (((r1\_unialg\_2 X0 X1) \wedge (r2\_msualg\_3 (k6\_msualg\_1 X0) (k9\_msualg\_1 X0) (k1\_msuhom\_1 (k6\_msualg\_1 X0) (k6\_msualg\_1 X1) (k9\_msualg\_1 X1)) (k2\_msuhom\_1 X0 X1 X2))) \Rightarrow (r3\_alg\_1 X0 X1 X2))))))$$