

t4\_msualg\_1 (TM-  
MYqBVY83fNfuM7dhEfE7L7fFnJWRDp1Gw)

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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  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_unialg\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_finseq\_1 : \iota \Rightarrow o$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $v2\_relat\_1 : \iota \Rightarrow o$  be given. Let  $u1\_unialg\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_card\_1 : \iota \Rightarrow o$  be given. Let  $k4\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_finseq\_2 : \iota \Rightarrow \iota$  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  $k5\_numbers : \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k4\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $v2\_margrel1 : \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k19\_margrel1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \quad (2)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow (k3\_finseq\_1 X0 = k1\_card\_1 X0) \quad (3)$$

Assume the following.

$$\forall X0.((v4\_unialg\_1 X0) \wedge (l1\_unialg\_1 X0)) \Rightarrow ((v2\_relat\_1 (u1\_unialg\_1 X0)) \wedge (\neg v1\_xboole\_0 (u1\_unialg\_1 X0))) \quad (4)$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow ((\neg v1\_xboole\_0 (k1\_card\_1 X0)) \wedge (v1\_card\_1 (k1\_card\_1 X0))) \quad (5)$$

Assume the following.

$$v1\_xboole\_0 \ k1\_xboole\_0 \tag{6}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 \ X0) \Rightarrow ((v1\_xboole\_0 \ (k1\_card\_1 \ X0)) \wedge (v1\_card\_1 \ (k1\_card\_1 \ X0))) \tag{7}$$

Assume the following.

$$\forall X0.(l1\_unialg\_1 \ X0) \Rightarrow (m2\_finseq\_1 \ (u1\_unialg\_1 \ X0) \ (k4\_partfun1 \ (k3\_finseq\_2 \ (u1\_struct\_0 \ X0) \ (u1\_struct\_0 \ X0)))) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 \ X1 \ X0) \Rightarrow ((v1\_funct\_1 \ X1) \wedge (v1\_finseq\_1 \ X1) \wedge (m1\_subset\_1 \ X1 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ k5\_numbers \ X0)))) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1 \ X1 \ X0) \Rightarrow ((v1\_relat\_1 \ X1) \wedge (v1\_funct\_1 \ X1) \wedge (v1\_finseq\_1 \ X1)) \tag{10}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 \ X0) \wedge ((v2\_unialg\_1 \ X0) \wedge ((v4\_unialg\_1 \ X0) \wedge (l1\_unialg\_1 \ X0)))) \Rightarrow (m2\_finseq\_1 \ (k1\_unialg\_1 \ X0) \ k5\_numbers) \tag{11}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 \ X0) \wedge ((v2\_unialg\_1 \ X0) \wedge ((v4\_unialg\_1 \ X0) \wedge (l1\_unialg\_1 \ X0)))) \Rightarrow (\forall X1.(m2\_finseq\_1 \ X1 \ k5\_numbers) \Rightarrow \\ & ((X1 = k1\_unialg\_1 \ X0) \Leftrightarrow ((k3\_finseq\_1 \ X1 = k3\_finseq\_1 \ (u1\_unialg\_1 \ X0)) \wedge (\forall X2.(v7\_ordinal1 \ X2) \Rightarrow ((X2 \in k4\_finseq\_1 \ X1) \Rightarrow (\forall X3. \\ & ((v1\_funct\_1 \ X3) \wedge ((\neg v1\_xboole\_0 \ X3) \wedge ((v2\_margrel1 \ X3) \wedge (m1\_subset\_1 \ X3 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ (k3\_finseq\_2 \ (u1\_struct\_0 \ X0) \ (u1\_struct\_0 \ X0)))))) \Rightarrow ((X3 = k1\_funct\_1 \ (u1\_unialg\_1 \ X0) \ X2) \Rightarrow \\ & (k1\_funct\_1 \ X1 \ X2 = k19\_margrel1 \ X3)))))))))) \end{aligned} \tag{12}$$

**Theorem 1**

$$\forall X0.((\neg v2\_struct\_0 \ X0) \wedge ((v2\_unialg\_1 \ X0) \wedge ((v3\_unialg\_1 \ X0) \wedge ((v4\_unialg\_1 \ X0) \wedge (l1\_unialg\_1 \ X0)))))) \Rightarrow (\neg v1\_xboole\_0 \ (k1\_unialg\_1 \ X0))$$