

116\_msuhom\_1 (TM-  
cKHrHW9YGy97Bz8PcGPjnM25RatNWXM1i)

October 27, 2020

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  $k4\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_unialg\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_unialg\_1 : \iota \Rightarrow \iota$  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  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  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  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  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. Let  $k2\_finseq\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \quad (1)$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow (k4\_finseq\_1 X0 = k9\_xtuple\_0 X0) \quad (2)$$

Assume the following.

$$\forall X0. (l1\_unialg\_1 X0) \Rightarrow (m2\_finseq\_1 (u1\_unialg\_1 X0) (k4\_partfun1 (k3\_finseq\_2 (u1\_struct\_0 X0)) (u1\_struct\_0 X0))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m2\_finseq\_1 X1 X0) \Rightarrow ((v1\_funct\_1 X1) \wedge ((v1\_finseq\_1 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers X0)))))) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1 X1 X0)\Rightarrow((v1\_relat\_1 X1)\wedge(v1\_funct\_1 X1)\wedge(v1\_finseq\_1 X1)) \quad (5)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v1\_finseq\_1 X0)))\Rightarrow(m2\_subset\_1 (k3\_finseq\_1 X0) k1\_numbers k5\_numbers) \quad (6)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0)\wedge((v2\_unialg\_1 X0)\wedge((v4\_unialg\_1 X0)\wedge(l1\_unialg\_1 X0))))\Rightarrow(m2\_finseq\_1 (k1\_unialg\_1 X0) k5\_numbers) \quad (7)$$

Assume the following.

$$\begin{aligned} &\forall X0.((\neg v2\_struct\_0 X0)\wedge((v2\_unialg\_1 X0)\wedge((v4\_unialg\_1 X0)\wedge(l1\_unialg\_1 X0))))\Rightarrow(\forall X1.(m2\_finseq\_1 X1 k5\_numbers)\Rightarrow \\ &((X1 = k1\_unialg\_1 X0)\Leftrightarrow((k3\_finseq\_1 X1 = k3\_finseq\_1 (u1\_unialg\_1 X0))\wedge(\forall X2.(v7\_ordinal1 X2)\Rightarrow((X2 \in k4\_finseq\_1 X1)\Rightarrow(\forall X3. \\ &((v1\_funct\_1 X3)\wedge((\neg v1\_xboole\_0 X3)\wedge((v2\_margrel1 X3)\wedge(m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k3\_finseq\_2 (u1\_struct\_0 X0)) (u1\_struct\_0 X0))))))\Rightarrow((X3 = k1\_funct\_1 (u1\_unialg\_1 X0) X2)\Rightarrow \\ &(k1\_funct\_1 X1 X2 = k19\_margrel1 X3)))))))))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v1\_finseq\_1 X0)))\Rightarrow(\forall X1.(m2\_subset\_1 X1 k1\_numbers k5\_numbers)\Rightarrow((X1 = k3\_finseq\_1 X0)\Leftrightarrow(k2\_finseq\_1 X1 = k9\_xtuple\_0 X0))) \quad (9)$$

**Theorem 1**

$$\forall X0.((\neg v2\_struct\_0 X0)\wedge((v2\_unialg\_1 X0)\wedge((v3\_unialg\_1 X0)\wedge((v4\_unialg\_1 X0)\wedge(l1\_unialg\_1 X0))))))\Rightarrow(k4\_finseq\_1 (k1\_unialg\_1 X0) = k4\_finseq\_1 (u1\_unialg\_1 X0))$$