

t23\_fvsum\_1 (TMcSe-  
Fof7XFrSaBD1JAbXmYGykT5eBEJXUe)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $m2\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_fvsum\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k5\_fvsum\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  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  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $l2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $v3\_card\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.((\neg v2\_struct\_0 \\ & X1) \wedge (l2\_algstr\_0 X1)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\ & X1)) \Rightarrow (\forall X3.(m2\_finseq\_1 X3 (u1\_struct\_0 X1)) \Rightarrow (((X0 \in k4\_finseq\_1 \\ & (k5\_fvsum\_1 X1 X3)) \wedge (X2 = k1\_funct\_1 X3 X0)) \Rightarrow (k1\_funct\_1 (k5\_fvsum\_1 \\ & X1 X3) X0 = k4\_algstr\_0 X1 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_2 X1 X0) \Rightarrow (\forall X2.(m2\_finseq\_2 X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((m1\_subset\_1 X0 k5\_numbers) \wedge \\ & (((\neg v2\_struct\_0 X1) \wedge (l2\_algstr\_0 X1)) \wedge (m1\_subset\_1 X2 (k4\_finseq\_2 \\ & X0 (u1\_struct\_0 X1)))))) \Rightarrow (k6\_fvsum\_1 X0 X1 X2 = k5\_fvsum\_1 X1 X2) \end{aligned} \quad (4)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow \\ & (k4\_finseq\_1 X0 = k9\_xtuple\_0 X0) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow \\ & (k3\_finseq\_1 X0 = k1\_card\_1 X0) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_struct\_0 X0)) \Rightarrow (\neg v1\_xboole\_0 \\ & (u1\_struct\_0 X0)) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1\_finseq\_2 X1 X0) \Rightarrow (\forall X2. (m2\_finseq\_2 \\ & X2 X0 X1) \Rightarrow (m2\_finseq\_1 X2 X0)) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m2\_finseq\_1 X1 X0) \Rightarrow ((v1\_funct\_1 X1) \wedge \\ & (v1\_finseq\_1 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers \\ & X0)))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1\_finseq\_1 X1 X0) \Rightarrow ((v1\_relat\_1 X1) \wedge \\ & (v1\_funct\_1 X1) \wedge (v1\_finseq\_1 X1)) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0. (l2\_struct\_0 X0) \Rightarrow (l1\_struct\_0 X0) \quad (12)$$

Assume the following.

$$\forall X0. (l2\_algstr\_0 X0) \Rightarrow ((l2\_struct\_0 X0) \wedge (l1\_algstr\_0 X0)) \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((m1\_subset\_1 X0 k5\_numbers)\wedge \\ & (((\neg v2\_struct\_0 X1)\wedge(l2\_algstr\_0 X1))\wedge(m1\_subset\_1 X2 (k4\_finseq\_2 \\ & X0 (u1\_struct\_0 X1))))))\Rightarrow(m2\_finseq\_2 (k6\_fvsu1 X0 X1 X2) (u1\_struct\_0 \\ & X1) (k4\_finseq\_2 X0 (u1\_struct\_0 X1))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.(v7\_ordinal1 X0)\Rightarrow(m1\_finseq\_2 (k4\_finseq\_2 X0 X1) X1) \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v1\_finseq\_1 X0)))\Rightarrow \\ & (m2\_subset\_1 (k3\_finseq\_1 X0) k1\_numbers k5\_numbers) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.(v3\_card\_1 X1 X0)\Leftrightarrow(k1\_card\_1 X1 = X0) \quad (17)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v1\_finseq\_1 X0)))\Rightarrow \\ & (\forall X1.(m2\_subset\_1 X1 k1\_numbers k5\_numbers)\Rightarrow((X1 = k3\_finseq\_1 \\ & X0)\Leftrightarrow(k2\_finseq\_1 X1 = k9\_xtuple\_0 X0))) \end{aligned} \quad (18)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1)\Rightarrow(v7\_ordinal1 X0) \quad (19)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\wedge(v7\_ordinal1 X1))\Rightarrow \\ & (\forall X2.(m1\_subset\_1 X2 (k4\_finseq\_2 X1 X0))\Rightarrow(v3\_card\_1 X2 \\ & X1)) \end{aligned} \quad (20)$$

### Theorem 1

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers)\Rightarrow(\forall X1.(m1\_subset\_1 \\ & X1 k5\_numbers)\Rightarrow(\forall X2.((\neg v2\_struct\_0 X2)\wedge(l2\_algstr\_0 \\ & X2))\Rightarrow(\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 X2))\Rightarrow(\forall X4. \\ & (m2\_finseq\_2 X4 (u1\_struct\_0 X2) (k4\_finseq\_2 X1 (u1\_struct\_0 \\ & X2))))\Rightarrow(((X0 \in k2\_finseq\_1 X1)\wedge(X3 = k1\_funct\_1 X4 X0))\Rightarrow(k1\_funct\_1 \\ & (k6\_fvsu1 X1 X2 X4) X0 = k4\_algstr\_0 X2 X3)))))) \end{aligned}$$