

t69_fvsum_1

(TMErQWMX3WJz6vv7BjXhhf9mnkA1eL1uX2E)

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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 $v3_group_1 : \iota \Rightarrow o$ be given. Let $v5_group_1 : \iota \Rightarrow o$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ 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 $k10_fvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_fvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.((\neg v2_struct_0 \\ & X1) \wedge ((v3_group_1 X1) \wedge (l3_algstr_0 X1))) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X1)) \Rightarrow (\forall X3.(m2_finseq_2 X3 (u1_struct_0 \\ & X1) (k4_finseq_2 X0 (u1_struct_0 X1))) \Rightarrow (\forall X4.(m2_finseq_2 \\ & X4 (u1_struct_0 X1) (k4_finseq_2 X0 (u1_struct_0 X1))) \Rightarrow (k10_fvsum_1 \\ & X0 X1 (k12_fvsum_1 X0 X1 X3 X4) X2 = k12_fvsum_1 X0 X1 (k10_fvsum_1 \\ & X0 X1 X3 X2) X4)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.((\neg v2_struct_0 \\ & X1) \wedge ((v5_group_1 X1) \wedge (l3_algstr_0 X1))) \Rightarrow (\forall X2.(m2_finseq_2 \\ & X2 (u1_struct_0 X1) (k4_finseq_2 X0 (u1_struct_0 X1))) \Rightarrow (\forall X3. \\ & (m2_finseq_2 X3 (u1_struct_0 X1) (k4_finseq_2 X0 (u1_struct_0 \\ & X1))) \Rightarrow (k12_fvsum_1 X0 X1 X2 X3 = k12_fvsum_1 X0 X1 X3 X2)))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (m1_finseq_2 X1 X0) \Rightarrow (\forall X2. (m2_finseq_2 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \tag{3}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. (v7_ordinal1 X0) \Rightarrow (m1_finseq_2 (k4_finseq_2 X0 X1) X1) \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X0 \\ & k5_numbers)\wedge(((\neg v2_struct_0 X1)\wedge(l3_algstr_0 X1))\wedge((m1_subset_1 \\ & X2 (k4_finseq_2 X0 (u1_struct_0 X1)))\wedge(m1_subset_1 X3 (u1_struct_0 \\ & X1))))\Rightarrow(m2_finseq_2 (k10_fvsun_1 X0 X1 X2 X3) (u1_struct_0 X1) \\ & (k4_finseq_2 X0 (u1_struct_0 X1))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_ordinal1)\Rightarrow(v7_ordinal1 X0) \quad (7)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers)\Rightarrow(\forall X1.((\neg v2_struct_0 \\ & X1)\wedge((v3_group_1 X1)\wedge((v5_group_1 X1)\wedge(l3_algstr_0 X1))))\Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (u1_struct_0 X1))\Rightarrow(\forall X3.(m2_finseq_2 \\ & X3 (u1_struct_0 X1) (k4_finseq_2 X0 (u1_struct_0 X1)))\Rightarrow(\forall X4. \\ & (m2_finseq_2 X4 (u1_struct_0 X1) (k4_finseq_2 X0 (u1_struct_0 \\ & X1)))\Rightarrow((k10_fvsun_1 X0 X1 (k12_fvsun_1 X0 X1 X3 X4) X2 = k12_fvsun_1 \\ & X0 X1 (k10_fvsun_1 X0 X1 X3 X2) X4)\wedge(k10_fvsun_1 X0 X1 (k12_fvsun_1 \\ & X0 X1 X3 X4) X2 = k12_fvsun_1 X0 X1 X3 (k10_fvsun_1 X0 X1 X4 X2)))))) \end{aligned}$$