

t47_fvsum_1

(TMX4qsdrjVKm4SD8iupKCAMdgUQKe6MzR9q)

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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 $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_fvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_fvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_algstr_1 : \iota \Rightarrow o$ be given. Let $v4_algstr_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.((\neg v2_struct_0 \\ & X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge \\ & ((v4_rlvect_1 X1) \wedge (l2_algstr_0 X1)))))) \Rightarrow (\forall X2.(m2_finseq_2 \\ & X2 (u1_struct_0 X1) (k4_finseq_2 X0 (u1_struct_0 X1))) \Rightarrow (\forall X3. \\ & (m2_finseq_2 X3 (u1_struct_0 X1) (k4_finseq_2 X0 (u1_struct_0 \\ & X1))) \Rightarrow (\forall X4.(m2_finseq_2 X4 (u1_struct_0 X1) (k4_finseq_2 \\ & X0 (u1_struct_0 X1))) \Rightarrow (k8_fvsum_1 X0 X1 X2 (k8_fvsum_1 X0 X1 X3 X4) = \\ & k4_fvsum_1 X0 X1 (k8_fvsum_1 X0 X1 X2 X3) X4)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.((\neg v2_struct_0 \\ & X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge \\ & ((v4_rlvect_1 X1) \wedge (l2_algstr_0 X1)))))) \Rightarrow (\forall X2.(m2_finseq_2 \\ & X2 (u1_struct_0 X1) (k4_finseq_2 X0 (u1_struct_0 X1))) \Rightarrow (k8_fvsum_1 \\ & X0 X1 X2 X2 = k5_finseq_2 (u1_struct_0 X1) X0 (k4_struct_0 X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.((\neg v2_struct_0 \\ & X1) \wedge ((v13_algstr_0 X1) \wedge ((v1_algstr_1 X1) \wedge ((v3_rlvect_1 X1) \wedge \\ & ((v4_rlvect_1 X1) \wedge (l2_algstr_0 X1)))))) \Rightarrow (\forall X2.(m2_finseq_2 \\ & X2 (u1_struct_0 X1) (k4_finseq_2 X0 (u1_struct_0 X1))) \Rightarrow (k8_fvsum_1 \\ & X0 X1 X2 (k5_finseq_2 (u1_struct_0 X1) X0 (k4_struct_0 X1)) = X2))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(l2_algstr_0 X0) \Rightarrow & (((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 \\ X0) \wedge ((v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0)))) \Rightarrow & ((\neg v2_struct_0 X0) \wedge \\ & ((v1_algstr_1 X0) \wedge (v4_algstr_1 X0)))) \end{aligned} \quad (4)$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_subset_1 X0 \ k5_numbers) \Rightarrow & (\forall X1.((\neg v2_struct_0 \\ X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge \\ & ((v4_rlvect_1 X1) \wedge (l2_algstr_0 X1)))))) \Rightarrow (\forall X2.(m2_finseq_2 \\ X2 (u1_struct_0 X1) (k4_finseq_2 X0 (u1_struct_0 X1))) \Rightarrow (\forall X3. \\ & (m2_finseq_2 X3 (u1_struct_0 X1) (k4_finseq_2 X0 (u1_struct_0 \\ X1))) \Rightarrow (X2 = k4_fvsu1 X0 X1 (k8_fvsu1 X0 X1 X2 X3) X3)))) \end{aligned}$$