

t15_mfold_2 (TMQWfXRMKNHo- JbpcSu4TNgmNGGGz4DVEjib)

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Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k23_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k16_rvsum_1 : \iota \Rightarrow \iota$ be given. Let $k7_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k14_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k22_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_rvsum_1 : \iota \Rightarrow \iota$ 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 $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v3_valued_0 \\ & X0) \wedge (v1_finseq_1 X0)))) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 \\ & X1) \wedge ((v3_valued_0 X1) \wedge (v1_finseq_1 X1)))) \Rightarrow (k16_rvsum_1 (k7_finseq_1 \\ & X0 X1) = k9_binop_2 (k16_rvsum_1 X0) (k16_rvsum_1 X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2_finseq_1 X0 k1_numbers) \Rightarrow (\forall X1.(m2_finseq_1 \\ & X1 k1_numbers) \Rightarrow (\forall X2.(m2_finseq_1 X2 k1_numbers) \Rightarrow (\forall X3. \\ & (m2_finseq_1 X3 k1_numbers) \Rightarrow (((k3_finseq_1 X0 = k3_finseq_1 X1) \wedge \\ & (k3_finseq_1 X2 = k3_finseq_1 X3)) \Rightarrow (k14_rvsum_1 (k8_finseq_1 \\ & k1_numbers X0 X2) (k8_finseq_1 k1_numbers X1 X3) = k8_finseq_1 k1_numbers \\ & (k14_rvsum_1 X0 X1) (k14_rvsum_1 X2 X3)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m2_finseq_1 X1 X0) \Leftrightarrow (m1_finseq_1 X1 X0) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((m1_finseq_1 X1 X0) \wedge (m1_finseq_1 X2 X0)) \Rightarrow (k8_finseq_1 X0 X1 X2 = k7_finseq_1 X1 X2) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1 X0)\wedge(v1_funct_1 X0)\wedge(v3_valued_0 X0)\wedge(v1_finseq_1 X0)))\wedge((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge((v3_valued_0 X1)\wedge(v1_finseq_1 X1))))\Rightarrow(k23_rvsum_1 X0 X1 = k22_rvsum_1 X0 X1) \quad (5)$$

Assume the following.

$$\forall X0.(m1_finseq_1 X0 k1_numbers)\Rightarrow(k18_rvsum_1 X0 = k16_rvsum_1 X0) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge((v1_finseq_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X0)))))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_finseq_1 X1))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_finseq_1 X1 X0)\wedge(m1_finseq_1 X2 X0))\Rightarrow(m2_finseq_1 (k8_finseq_1 X0 X1 X2) X0) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge((v3_valued_0 X0)\wedge(v1_finseq_1 X0))))\wedge((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge((v3_valued_0 X1)\wedge(v1_finseq_1 X1)))))\Rightarrow(m2_finseq_1 (k14_rvsum_1 X0 X1) k1_numbers) \quad (10)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge((v3_valued_0 X0)\wedge(v1_finseq_1 X0))))\Rightarrow(\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge((v3_valued_0 X1)\wedge(v1_finseq_1 X1))))\Rightarrow(k22_rvsum_1 X0 X1 = k18_rvsum_1 (k14_rvsum_1 X0 X1))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(((v1_relat_1 X0)\wedge(v1_funct_1 X0)\wedge(v3_valued_0 X0)\wedge(v1_finseq_1 X0)))\wedge((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge((v3_valued_0 X1)\wedge(v1_finseq_1 X1))))\Rightarrow(k23_rvsum_1 X0 X1 = k23_rvsum_1 X1 X0) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 X1 X0)\Rightarrow(v5_relat_1 X1 X0) \quad (13)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge(v5_relat_1 X0 k1_numbers))\Rightarrow((v1_relat_1 X0)\wedge(v3_valued_0 X0)) \quad (14)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m2_finseq_1 X0 k1_numbers)\Rightarrow(\forall X1.(m2_finseq_1 \\ & X1 k1_numbers)\Rightarrow(\forall X2.(m2_finseq_1 X2 k1_numbers)\Rightarrow(\forall X3. \\ & (m2_finseq_1 X3 k1_numbers)\Rightarrow(((k3_finseq_1 X0 = k3_finseq_1 X1)\wedge \\ & (k3_finseq_1 X2 = k3_finseq_1 X3))\Rightarrow(k23_rsum_1 (k8_finseq_1 \\ & k1_numbers X0 X2) (k8_finseq_1 k1_numbers X1 X3) = k9_binop_2 (k23_rsum_1 \\ & X0 X1) (k23_rsum_1 X2 X3)))))) \end{aligned}$$