

t109_rvsum_1 (TMMPU-
JhZ3NQgWFoXHAKxr1q16AaSfwGRfEc)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k4_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k21_rvsum_1 : \iota \Rightarrow \iota$ be given. Let $k13_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_square_1 : \iota \Rightarrow \iota$ be given. Let $k15_rvsum_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k3_square_1 : \iota \Rightarrow \iota$ be given. Let $k18_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k39_valued_1 : \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m2_finseq_2 X1 k1_numbers \\ (k4_finseq_2 X0 k1_numbers)) \Rightarrow (\forall X2.(m2_finseq_2 X2 k1_numbers \\ (k4_finseq_2 X0 k1_numbers)) \Rightarrow (k21_rvsum_1 (k15_rvsum_1 X0 X1 \\ X2) = k11_binop_2 (k21_rvsum_1 X1) (k21_rvsum_1 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_2 X1 X0) \Rightarrow (\forall X2.(m2_finseq_2 \\ X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \quad (2)$$

Assume the following.

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

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (k5_square_1 X0 = k3_square_1 \\ X0) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((v7_ordinal1 X0) \wedge ((m1_subset_1 \\ X1 (k4_finseq_2 X0 k1_numbers)) \wedge (m1_subset_1 X2 (k4_finseq_2 \\ X0 k1_numbers)))) \Rightarrow (k15_rvsum_1 X0 X1 X2 = k18_valued_1 X1 X2) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1\ X0)\wedge(m1_subset_1\ X1\ (k4_finseq_2\ X0\ k1_numbers)))\Rightarrow(k13_rvsum_1\ X0\ X1 = k39_valued_1\ X1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0\ X0)\wedge(v1_xreal_0\ X1))\Rightarrow(k11_binop_2\ X0\ X1 = k3_xcmplx_0\ X0\ X1) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_2\ X1\ X0)\Rightarrow(\forall X2.(m2_finseq_2\ X2\ X0\ X1)\Rightarrow(m2_finseq_1\ X2\ X0)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1\ X1\ X0)\Rightarrow((v1_relat_1\ X1)\wedge(v1_funct_1\ X1)\wedge(v1_finseq_1\ X1)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(v7_ordinal1\ X0)\Rightarrow(m1_finseq_2\ (k4_finseq_2\ X0\ X1)\ X1) \quad (10)$$

Assume the following.

$$\forall X0.(m1_finseq_1\ X0\ k1_numbers)\Rightarrow(m1_subset_1\ (k21_rvsum_1\ X0)\ k1_numbers) \quad (11)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge(v1_valued_0\ X0)))\Rightarrow(k39_valued_1\ X0 = k18_valued_1\ X0\ X0) \quad (12)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0\ X0)\Rightarrow(k3_square_1\ X0 = k3_xcmplx_0\ X0\ X0) \quad (13)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge(v3_valued_0\ X0))\Rightarrow((v1_relat_1\ X0)\wedge(v1_valued_0\ X0)) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1\ X1\ X0)\Rightarrow(v5_relat_1\ X1\ X0) \quad (15)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge(v5_relat_1\ X0\ k1_numbers))\Rightarrow((v1_relat_1\ X0)\wedge(v3_valued_0\ X0)) \quad (16)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (17)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xcmplx_0 X0) \quad (18)$$

Theorem 1

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m2_finseq_2 X1 k1_numbers \\ (k4_finseq_2 X0 k1_numbers)) \Rightarrow (k21_rsum_1 (k13_rsum_1 X0 X1) = \\ k5_square_1 (k21_rsum_1 X1))) \end{aligned}$$