

t41_rvsum_2

(TMbcyKHdK3DYFY2HQ67ycMB6oc54Yffgr81)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v3_card_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_numbers : \iota$ be given. Let $k17_rvsum_1 : \iota \Rightarrow \iota$ be given. Let $k8_rvsum_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_rvsum_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ be given. Let $k5_rvsum_2 : \iota \Rightarrow \iota$ be given. Let $k1_binop_2 : \iota \Rightarrow \iota$ be given. Let $k16_rvsum_1 : \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k45_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_rvsum_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k30_valued_1 : \iota \Rightarrow \iota$ be given. Let $k1_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k5_numbers : \iota$ be given. Let $k4_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.((v3_card_1 X1 X0) \wedge (\\ & \quad m2_finseq_1 X1 k2_numbers)) \Rightarrow (\forall X2.((v3_card_1 X2 X0) \wedge (\\ & \quad m2_finseq_1 X2 k2_numbers)) \Rightarrow (k17_rvsum_1 (k4_rvsum_2 X0 X1 X2) = \\ & \quad k3_binop_2 (k17_rvsum_1 X1) (k17_rvsum_1 X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge ((v1_finseq_1 \\ & \quad X0) \wedge (v1_valued_0 X0)))) \Rightarrow (k17_rvsum_1 (k5_rvsum_2 X0) = k1_binop_2 \\ & \quad (k16_rvsum_1 X0)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (\\ & \quad k2_xcmplx_0 X0 (k4_xcmplx_0 X1) = k6_xcmplx_0 X0 X1) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_2 X1 X0)\Rightarrow(\forall X2.(m2_finseq_2 X2 X0 X1)\Leftrightarrow(m1_subset_1 X2 X1)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Leftrightarrow(m1_finseq_1 X1 X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v7_ordinal1 X0)\wedge(((v3_card_1 X1 X0)\wedge(m1_finseq_1 X1 k2_numbers))\wedge((v3_card_1 X2 X0)\wedge(m1_finseq_1 X2 k2_numbers))))\Rightarrow(k8_rvsum_2 X0 X1 X2 = k45_valued_1 X1 X2) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0)\wedge((v3_card_1 X1 X0)\wedge(m1_finseq_1 X1 k2_numbers)))\Rightarrow(k6_rvsum_2 X0 X1 = k30_valued_1 X1) \quad (7)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge((v1_finseq_1 X0)\wedge(v1_valued_0 X0))))\Rightarrow(k5_rvsum_2 X0 = k30_valued_1 X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v7_ordinal1 X0)\wedge(((v3_card_1 X1 X0)\wedge(m1_finseq_1 X1 k2_numbers))\wedge((v3_card_1 X2 X0)\wedge(m1_finseq_1 X2 k2_numbers))))\Rightarrow(k4_rvsum_2 X0 X1 X2 = k1_valued_1 X1 X2) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(k4_binop_2 X0 X1 = k6_xcmplx_0 X0 X1) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(k3_binop_2 X0 X1 = k2_xcmplx_0 X0 X1) \quad (11)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0)\Rightarrow(k1_binop_2 X0 = k4_xcmplx_0 X0) \quad (12)$$

Assume the following.

$$\forall X0.(m1_finseq_1 X0 k2_numbers)\Rightarrow(k17_rvsum_1 X0 = k16_rvsum_1 X0) \quad (13)$$

Assume the following.

$$\neg v1_xboole_0 \ k2_numbers \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 \ X1 \ X0) \Rightarrow ((v1_funct_1 \ X1) \wedge (v1_finseq_1 \ X1) \wedge (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ X0)))) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1 \ X1 \ X0) \Rightarrow ((v1_relat_1 \ X1) \wedge (v1_funct_1 \ X1) \wedge (v1_finseq_1 \ X1)) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 \ X0) \wedge ((v3_card_1 \ X1 \ X0) \wedge (m1_finseq_1 \ X1 \ k2_numbers))) \Rightarrow (m2_finseq_2 \ (k6_rvsum_2 \ X0 \ X1) \ k2_numbers \ (k4_finseq_2 \ X0 \ k2_numbers)) \quad (17)$$

Assume the following.

$$\forall X0.((v1_relat_1 \ X0) \wedge ((v1_funct_1 \ X0) \wedge ((v1_finseq_1 \ X0) \wedge (v1_valued_0 \ X0)))) \Rightarrow (m2_finseq_1 \ (k5_rvsum_2 \ X0) \ k2_numbers) \quad (18)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 \ X0) \Rightarrow (v1_xcmplx_0 \ (k4_xcmplx_0 \ X0)) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.(v7_ordinal1 \ X0) \Rightarrow (m1_finseq_2 \ (k4_finseq_2 \ X0 \ X1) \ X1) \quad (20)$$

Assume the following.

$$\forall X0.((v1_relat_1 \ X0) \wedge ((v1_funct_1 \ X0) \wedge ((v1_valued_0 \ X0) \wedge (v1_finseq_1 \ X0)))) \Rightarrow (v1_xcmplx_0 \ (k16_rvsum_1 \ X0)) \quad (21)$$

Assume the following.

$$\forall X0.((v1_relat_1 \ X0) \wedge ((v1_funct_1 \ X0) \wedge (v1_valued_0 \ X0))) \Rightarrow (\forall X1.((v1_relat_1 \ X1) \wedge ((v1_funct_1 \ X1) \wedge (v1_valued_0 \ X1))) \Rightarrow (k45_valued_1 \ X0 \ X1 = k1_valued_1 \ X0 \ (k30_valued_1 \ X1))) \quad (22)$$

Assume the following.

$$\forall X0.(m1_finseq_1 \ X0 \ k2_numbers) \Rightarrow (v1_valued_0 \ X0) \quad (23)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 \ X0) \wedge (v7_ordinal1 \ X1)) \Rightarrow (\forall X2.(m1_subset_1 \ X2 \ (k4_finseq_2 \ X1 \ X0)) \Rightarrow (v3_card_1 \ X2 \ X1)) \quad (24)$$

Theorem 1

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.((v3_card_1\ X1\ X0) \wedge \\ m2_finseq_1\ X1\ k2_numbers)) \Rightarrow (\forall X2.((v3_card_1\ X2\ X0) \wedge \\ m2_finseq_1\ X2\ k2_numbers)) \Rightarrow (k17_rsum_1\ (k8_rsum_2\ X0\ X1\ X2) = \\ k4_binop_2\ (k17_rsum_1\ X1)\ (k17_rsum_1\ X2))) \end{aligned}$$