

## t131\_rvsum\_1

(TMFmPcvQDabsrwFm3nEtVT88Z3CesotKjc3)

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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  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k23\_rvsum\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k11\_rvsum\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k11\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k10\_rvsum\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $k24\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $v3\_card\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge ((v3\_valued\_0 \\ & X0) \wedge (v1\_finseq\_1 X0)))) \Rightarrow (\forall X1.((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 \\ & X1) \wedge ((v3\_valued\_0 X1) \wedge (v1\_finseq\_1 X1)))) \Rightarrow (\forall X2.(v1\_xreal\_0 \\ & X2) \Rightarrow ((k3\_finseq\_1 X0 = k3\_finseq\_1 X1) \Rightarrow (k23\_rvsum\_1 (k10\_rvsum\_1 \\ & X0 X2) X1 = k11\_binop\_2 X2 (k23\_rvsum\_1 X0 X1)))))) \end{aligned} \quad (1)$$

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.

$$\forall X0. ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow (k3\_finseq\_1 X0 = k1\_card\_1 X0) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v7\_ordinal1\ X0)\wedge((m1\_subset\_1\ X1\ (k4\_finseq\_2\ X0\ k1\_numbers))\wedge(v1\_xreal\_0\ X2)))\Rightarrow(k11\_rvsum\_1\ X0\ X1\ X2 = k24\_valued\_1\ X1\ X2) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge((v3\_valued\_0\ X0)\wedge(v1\_finseq\_1\ X0))))\wedge(v1\_xreal\_0\ X1))\Rightarrow(k10\_rvsum\_1\ X0\ X1 = k24\_valued\_1\ X0\ X1) \quad (6)$$

Assume the following.

$$\neg v1\_xboole\_0\ k1\_numbers \quad (7)$$

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.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0)\Rightarrow((v1\_funct\_1\ X1)\wedge((v1\_finseq\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ X0)))))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0)\Rightarrow((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(v7\_ordinal1\ X0)\Rightarrow(m1\_finseq\_2\ (k4\_finseq\_2\ X0\ X1)\ X1) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(v3\_card\_1\ X1\ X0)\Leftrightarrow(k1\_card\_1\ X1 = X0) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0)\Rightarrow(v5\_relat\_1\ X1\ X0) \quad (13)$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge(v5\_relat\_1\ X0\ k1\_numbers))\Rightarrow((v1\_relat\_1\ X0)\wedge(v3\_valued\_0\ X0)) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge(v7\_ordinal1\ X1))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k4\_finseq\_2\ X1\ X0))\Rightarrow(v3\_card\_1\ X2\ X1)) \quad (15)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(m2\_finseq\_2\ X1\ k1\_numbers \\ & (k4\_finseq\_2\ X0\ k1\_numbers)) \Rightarrow (\forall X2.(m2\_finseq\_2\ X2\ k1\_numbers \\ & (k4\_finseq\_2\ X0\ k1\_numbers)) \Rightarrow (\forall X3.(v1\_xreal\_0\ X3) \Rightarrow (k23\_rsum\_1 \\ & (k11\_rsum\_1\ X0\ X1\ X3)\ X2 = k11\_binop\_2\ X3\ (k23\_rsum\_1\ X1\ X2)))))) \end{aligned}$$