

# t102\_rvsum\_1 (TMKvzYigqtKCvCigLFDmGgZC- TRJTNwA6noq)

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k19\_rvsum\_1 : \iota \Rightarrow \iota$  be given. Let  $k5\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k1\_finsop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k35\_binop\_2 : \iota$  be given. Let  $k4\_binop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_setwiseo : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k2\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  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  $k4\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(m2\_finseq\_1 X0 k1\_numbers) \Rightarrow (k19\_rvsum\_1 X0 = k1\_finsop\_1 k1\_numbers X0 k35\_binop\_2) \quad (1)$$

Assume the following.

$$k4\_binop\_1 k1\_numbers k35\_binop\_2 = np\_1 \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((v1\_funct\_1 X1) \wedge ( \\ (v1\_funct\_2 X1 (k2\_zfmisc\_1 X0 X0) X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ (k2\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0) X0)))))) \Rightarrow (\forall X2.(v7\_ordinal1 \\ X2) \Rightarrow ((v1\_setwiseo X1 X0) \Rightarrow (k1\_finsop\_1 X0 (k5\_finseq\_2 X0 X2 (k4\_binop\_1 \\ X0 X1)) X1 = k4\_binop\_1 X0 X1)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} ((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge \\ ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0 X0)\wedge((v7\_ordinal1 X1)\wedge(m1\_subset\_1 X2 X0)))\Rightarrow(k5\_finseq\_2 X0 X1 X2 = k2\_finseq\_2 X1 X2) \quad (6)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1)\wedge(v3\_ordinal1 k4\_ordinal1) \quad (7)$$

Assume the following.

$$\neg v1\_xboole\_0 k1\_numbers \quad (8)$$

Assume the following.

$$(v1\_funct\_1 k35\_binop\_2)\wedge((v1\_funct\_2 k35\_binop\_2 (k2\_zfmisc\_1 k1\_numbers k1\_numbers) k1\_numbers)\wedge(v1\_setwiseo k35\_binop\_2 k1\_numbers)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_2 X1 X0)\Rightarrow(\forall X2.(m2\_finseq\_2 X2 X0 X1)\Rightarrow(m2\_finseq\_1 X2 X0)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0 X0)\wedge((v7\_ordinal1 X1)\wedge(m1\_subset\_1 X2 X0)))\Rightarrow(m2\_finseq\_2 (k5\_finseq\_2 X0 X1 X2) X0 (k4\_finseq\_2 X1 X0)) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(v7\_ordinal1 X0)\Rightarrow(m1\_finseq\_2 (k4\_finseq\_2 X0 X1) X1) \quad (12)$$

Assume the following.

$$(v1\_funct\_1 k35\_binop\_2)\wedge((v1\_funct\_2 k35\_binop\_2 (k2\_zfmisc\_1 k1\_numbers k1\_numbers) k1\_numbers)\wedge(m1\_subset\_1 k35\_binop\_2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers) k1\_numbers)))) \quad (13)$$

**Theorem 1**

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow(k19\_rvsum\_1 (k5\_finseq\_2 k5\_numbers X0 np\_1) = np\_1)$$