

t19_rfunct_3
(TMXAF4CrarTbnsPWcjweiNTCLDZqoV9Q9mQ)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k14_rfunct_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k3_rfunct_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_rfunct_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_subset_1 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_setwiseo : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k13_rfunct_3 : \iota \Rightarrow \iota$ be given. Let $k4_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k1_finsop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $m1_rfunct_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_rfunct_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (v1_setwiseo (k13_rfunct_3 X0) (k3_rfunct_3 X0 k1_numbers)) \quad (2)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (k4_binop_1 (k3_rfunct_3 X0 k1_numbers) (k13_rfunct_3 X0) = k4_rfunct_3 X0 k1_numbers (k2_subset_1 X0) k6_numbers) \quad (3)$$

Assume the following.

$$\forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge (v1_funct_2 X1 (k2_zfmisc_1 X0 X0) X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) X0) X0)))) \Rightarrow ((v1_setwiseo X1 X0) \Rightarrow (k1_finsop_1 X0 (k6_finseq_1 X0) X1 = k4_binop_1 X0 X1))) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow(r2_relset_1 X0 X1 X2 X2)) \quad (5)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.k3_rfunct_3 X0 X1 = k4_partfun1 X0 X1 \quad (7)$$

Assume the following.

$$\forall X0.\exists X1.(m1_finseq_1 X1 X0)\wedge((v1_relat_1 X1)\wedge((v4_relat_1 X1 k5_numbers)\wedge((v5_relat_1 X1 X0)\wedge((v1_funct_1 X1)\wedge((v1_xboole_0 X1)\wedge((v1_finset_1 X1)\wedge(v1_finseq_1 X1))))))) \quad (8)$$

Assume the following.

$$\forall X0.v1_xboole_0 (k6_finseq_1 X0) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\neg v1_xboole_0 (k4_partfun1 X0 X1) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X2)\wedge(m1_rfunct_3 X2 X0 X1))\Rightarrow(\forall X3.(m2_rfunct_3 X3 X0 X1 X2)\Rightarrow((v1_funct_1 X3)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \quad (11)$$

Assume the following.

$$\forall X0.m2_finseq_1 (k6_finseq_1 X0) X0 \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.m1_rfunct_3 (k3_rfunct_3 X0 X1) X0 X1 \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_finseq_1 X1 (k3_rfunct_3 X0 k1_numbers)))\Rightarrow(m2_rfunct_3 (k14_rfunct_3 X0 X1) X0 k1_numbers (k3_rfunct_3 X0 k1_numbers)) \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow & ((v1_funct_1 (k13_rfunct_3 X0)) \wedge \\ & ((v1_funct_2 (k13_rfunct_3 X0) (k2_zfmisc_1 (k3_rfunct_3 X0 k1_numbers) \\ & (k3_rfunct_3 X0 k1_numbers)) (k3_rfunct_3 X0 k1_numbers)) \wedge (m1_subset_1 \\ & (k13_rfunct_3 X0) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (k3_rfunct_3 \\ & X0 k1_numbers) (k3_rfunct_3 X0 k1_numbers)) (k3_rfunct_3 X0 k1_numbers)))))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow & (\forall X1.(m2_finseq_1 X1 (k3_rfunct_3 \\ & X0 k1_numbers)) \Rightarrow (k14_rfunct_3 X0 X1 = k1_finsop_1 (k3_rfunct_3 \\ & X0 k1_numbers) X1 (k13_rfunct_3 X0))) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0.k2_subset_1 X0 = X0 \quad (17)$$

Theorem 1

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow & (r2_relset_1 X0 k1_numbers (k14_rfunct_3 \\ & X0 (k6_finseq_1 (k3_rfunct_3 X0 k1_numbers))) (k4_rfunct_3 X0 \\ & k1_numbers (k2_subset_1 X0) k6_numbers)) \end{aligned}$$